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ABSTRACT

Proceedings of a symposium sponsored by the Coalition for Education in the Outdoors (CEO) are presented in this report. The CEO is a network of institutions, organizations, agencies, businesses, and associations in support of outdoor education. This symposium, reflecting the work of CEO's Research Task Force, provides literature reviews and field research reports related to outdoor education and makes recommendations for future research. The document consists of three sections. The first section contains invited presentations and corresponding summary discussions on individual and personal growth, restorative experiences, group development and dynamics, and therapeutic uses of outdoor education. The second section contains refereed research papers based on specific programs for particular groups. The final section provides abstracts and selected research references on such topics as the ethics of outdoor leadership, neuroendocrine reactivity during the stress of an Outward Bound course; the phenomenology of wilderness experience and human development, the impact of corporate adventure programs, the facilitator role, and evaluation of outdoor educational programming. (LP)

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COALITION FOR EDUCATION IN THE OUTDOORS

RESEARCH SYMPOSIUM PROCEEDINGS

JANUARY 17-19, 1992

BRADFORD WOODS, INDIANA

KARLA A. HENDERSON, Ph.D.

EDITOR

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The Coalition for Education in the Outdoors initiated a Research Task Force in 1990 with the purpose of supporting the conduct of research in the field and the dissemination of the results. The symposium at Bradford Woods and these proceedings offer evidence of the success of this task force. At the 1992 Symposium, there was general agreement that the symposium be a regular occurrence. Information on future events will be available through the Coalition Office.

Coalition for Education in the Outdoors **Research Symposium Proceedings**

January 17-19, 1992

Bradford Woods, Indiana

The Coalition for Education in the Outdoors is a network of institutions, organizations, agencies, centers, businesses and associations linked and communicating in support of the broad purposes of educating in, for and about the outdoors. The Coalition assists in identifying the needs of its affiliates and the field of outdoor education, and seeks to find ways to assist in meeting those needs. The Coalition attempts to empower its affiliates in meeting their various constituent needs, as well as to advance the mission of outdoor education globally.

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**The Coalition for Education in the Outdoors
Research Symposium Proceedings**

1992

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**Coalition for Education in the Outdoors
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Keynote Presentation

Research in Outdoor Education: Individual and Personal Growth

Simon Priest
Brock University

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As the lead-off speaker at this research symposium, I feel an incumbent responsibility to present a short overview to "outdoor education" and to "research," so as to set the stage for my presentation on the topic of individual and personal growth. I'd like to begin by sharing one personal definition of "outdoor education" and then continue by presenting a philosophical research paradigm from which the bulk of my presentation will flow.

Outdoor Education

Since this gathering is about state-of-the-art research in outdoor education, I think the prudent starting place would be to define outdoor education. To have utility, any such definition should need to be general enough to incorporate all that takes place under our umbrella profession and yet be specific enough to identify the characteristics which make our field so unique. I offer the following attempt at ambiguity (Priest, 1986):

Outdoor education is an experiential method of learning, which takes place primarily through sensory involvement with the out-of-doors. In outdoor education, the emphasis for the subject of learning (in all three domains: cognitive, affective and motoric) is placed on **RELATIONSHIPS**: relationships concerning humans and natural resources.

Outdoor education has two main branches: **adventure education** and **environmental education**. Historically, each branch has addressed a different pair of relationships.

Adventure educators were principally concerned with the **intrapersonal** and **interpersonal** relationships: how humans understand themselves and work with others.

Environmental educators were primarily concerned with the **ecosystemic** and **ekistic** relationships: how components of an ecosystem interact and how humans influence or are influenced by the quality of those fragile ecosystems.

Truly functional outdoor education is a multidisciplinary combination addressing all four relationships regardless of the branch chosen by educators to deliver the learning.

The topic of my presentation is one of these four relationships: the intrapersonal. Other speakers will no doubt be addressing the remaining three relationships in turn. We will all be discussing our thoughts on what has been studied and what needs to be studied. However, in order to do justice to such a tall order, I believe some background on the nature of research is first warranted.

Research

The word "research" comes to us from the Latin *rescisco* (to find out the facts or to understand and know through inquiry) and *servo* (to watch or to observe). The term "research" literally means to look and look again (ie: search and re-search). More than mere replication and extension, research follows a process of inquiry that is rigorous (closely adhering to strict procedures or fundamental rules) and scientific (within the laws or postulates of existing knowledge or understanding). It is an ongoing quest for truth, where future work is proposed on the basis of present findings, which in turn were founded on past results. So new work builds on top of old!

In an effort to communicate this step by step process of inquiry, I offer the following philosophical view. Let me first apologize for the fact that I am a devout positivist and explain that, as a result of my beliefs, the design of this paradigm is distinctly rational. Permit me to further share that a close colleague of mine, herself a devoted naturalist, has convinced me of the need for more research that is multimethodological and interparadigmatic. So for those of you present who adhere to the more naturalistic perspective, I hope you can modify this view to better fit within your research beliefs.

Two mentors of mine once said that "sound research asks more questions than it answers." The idea being that a good study sets out to answer research questions, but invariably ends up creating many new questions to go along with the new found answers. If we believe that research is stringent and sequential in its approach (with later questions formulated from earlier answers), then I propose that the generic series of questions that are often asked by researchers follow the list shown in this pyramid shaped diagram in Figure 1, where the word **IT** refers to the research phenomenon or the thing being studied.

When scientists first encounter a new phenomenon, they begin to build a base of truth and understanding about **IT**: what they call their interpretation for the professional body of knowledge. They begin by describing the new occurrence: what does **IT** appear to be? Next, they move to the differentiation stage by determining what **IT** is similar to and different from. Then, they consider relationships (things associated with **IT**) and influence (things **IT** effects or is affected by). Finally, they attempt to regressively predict (will **IT** happen?) and experimentally control (can **IT** be made to or not to happen?) for each particular phenomenon. The key concept being that "new looking" takes place atop a strong foundation of "old looking" or in other words, proposed study is based on the existing body of knowledge, which was itself determined from previous inquiry.

By way of illustration, consider earthquakes as the phenomenon of study. The first thing early scientists did not do was to attempt prevention, since they lacked a sufficient base of experience with earthquakes: they did not know how to proceed. Instead they described and recorded earthquakes as a violent shaking of the ground with occasional cracking of its surface (Stage 1: description). Initially, earthquakes were compared and contrasted with volcanic eruptions (Stage 2: differentiation). Later, they were found to be associated with fault lines (Stage 3: relationships) and impacted by the stress of tectonic plate systems (Stage 4: influence). Today, with a broad and deep working body of knowledge, scientists are attempting to correctly predict earthquake occurrences (Stage 5: discrimination & regression). In the future, once a predictive equation has been established, then (and only then) will scientists attempt to gain control over and thus prevent earthquakes (Stage 6: experimentation & causality).

A Question of Research

Simon Priest
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Figure 1. A Question of Research

This same six stage sequence of inquiry is followed by the vast majority of scientific disciplines. In epidemiology, every time a new disease is discovered (e.g., AIDS), doctors and health researchers begin by describing it and carefully move sequentially through the six stages, building on earlier research. They do not go straight for finding a cure! Instead, they must build an underlying strata of truth and understanding. Such credible research takes time to slowly and cautiously build each layer of knowledge. To short cut or bypass stages, and attempt research at an unfounded level, risks wasted time, energy or resources. Furthermore, an accompanying probability is high that findings may be unapplicable or useless in adding to the professional body of knowledge. Hence, prior to constructing subsequent layers, the need for a strong foundation in earlier stages becomes painfully obvious.

Unfortunately, this pattern of a sequential inquiry process is not being followed (to the extent it should be) in the field of outdoor education. A fair descriptive base exists as to what programs are like, what they contain, and what happens during them. Some differentiation has taken place with aspects of programs being compared or contrasted with contemporary educational and recreational offerings. However, very little of the middle stage research has been conducted on relationships and influences such as identifying precise parts of a program associated with specific human behaviors. Instead, research has jumped to the upper levels of attempting to predict changes in human behavior and trying to "prove" that these changes are caused by outdoor education. Such upper level efforts may crumble and fall down (due to poor design and lack of rigour) likely resulting from unsettled lower layers (a weak truth or understanding of the "thing" being studied).

Research into Individual & Personal Growth

The remainder of my presentation will now focus on the body of knowledge concerning individual and personal growth in outdoor education. Within the domain of intrapersonal relationships in outdoor education, self-concept has received the most attention and is a fitting place to start. This construct has been measured by varied means and as many variables: self-actualization, self-esteem, self-evaluation, self-perception or locus of control scores to name a scant few.

For the most part, the following review considers sources published in the past decade only. Readers interested in research conducted prior to 1982, are referred to Ewert's (1983) excellent summary of self-concept and outdoor adventure. In *Outdoor Adventure and Self-concept: A research analysis*, Ewert reviewed and critiqued approximately fifty self-concept studies mostly connected with Outward Bound as a form of outdoor education or adventure programming. We will begin our treatise of self-concept at the point where he last left off.

If people accept my premise regarding the pyramid diagram presented moments ago, then I hope you will permit me to share "what is known" about self-concept (in general) and outdoor education or adventure programming (in specific) within that framework. Let's begin with the first layer of description and work toward causality.

Studies of Description

Numerous studies have described outdoor education programs and how these programs apparently improve self-concept. In earlier years, these studies concentrated on changes in the self concept of campers (Harris, 1976; Iida, 1976) school children (Henderson, 1986), or Outward Bound students (Hopkins, 1985; Pollack, 1976; Richards, 1977; Shore, 1977). In recent years, a broadening of the body of knowledge has taken place with descriptive and evaluative studies of self-concept gains in a wider variety of outdoor education clientele: youth at risk (Berman & Davis-Berman, 1989), families (Mason, 1987), teenage mothers (Goode & Broesamle, 1987), visually handicapped (Hackney, 1986), hearing impaired (Luckner, 1989), behavior disordered (Langsner

& Anderson, 1987), the chronically ill (Kessell, Resnick & Blum, 1985), psychiatric patients (Stitch & Sussman, 1981), Native Indians (Gale, 1989), camp staff (Henderson & Bialeschki, 1982) and exceptionally talented and gifted children (Milosevich, 1988). For the most part, these many studies have described changes in self-concept and have attributed these changes to outdoor education. They provide a solid foundation upon which we can build a better understanding, but they provide little else.

Studies of Differentiation

With a broad and deep descriptive base of self-concept and outdoor education in existence, a few notable studies of differentiation have been conducted. Several studies compared two groups. One was always the treatment group, while the other was a control (no treatment or other treatment) groups.

Kolb (1988) administered the Piers-Harris Children's Self-concept Scale to 41 treatment and 46 control subjects randomly assigned to a Solomon design. Subjects were grade nine students enrolled at an independent Christian preparatory school in Georgia. Those in the treatment groups underwent a twenty hour program (2 hours/week for 10 weeks) and a three day field trip. Subjects in the control groups received no outdoor experience, but were enrolled in other classes with the treatment subjects (hence the potential for cross-group influences to take place). Participation of all subjects was dictated as mandatory to avoid the influence of volunteerism. No mention was made of "challenge by choice" in the actual program activities: group initiatives, first aid training, rappelling, rock climbing, caving and wilderness living skills. Pre-tests were conducted within one week of the program start and post-tests were completed two weeks after the program finished. Several significant differences were detected by MANOVA, with group, test time, and gender as independent variables and the total raw score, plus three cluster scales (physical, anxiety, and popularity) as dependent variables. Although representation of the data did not follow convention and the interpretation was not clear, the outdoor education program appeared to have "a positive effect on the self-esteem of the subjects, with males showing greater change than females" (Kolb, 1988, p. 36).

McDonald and Howe (1989) also employed the Piers-Harris Children's Self-concept Scale with two groups of abused children. Over 28 consecutive days, the treatment group (n=18, random) received one hour/day of challenge/initiative games, inclusive of a debriefing period; while the control group (n=20, random) participated in traditional recreational games for the same amount of time, without any debriefing. The authors acknowledged possible bias from the novelty of the challenge/initiative games as compared with more common recreational games and from the influence of one researcher "instructing" both sets of games. Instrumentation was administered immediately before and immediately after the four weeks of gaming. Analysis of the data revealed (as expected) that the abused children had lower than average self-concepts prior to the treatment (thus giving them more room to increase). Both groups improved self-concept as a result of gaming (regardless of whether the games were challenge/initiative or traditional recreation), but the group experiencing the challenge/initiative games showed a significantly higher increase in self-concept than the group experiencing traditional recreational games. Similar differences were found on four of the six cluster scales (behavior, anxiety, popularity and happiness), leading the researchers to contend "that challenge/initiative games conducted in an existing recreation setting for one hour daily over four weeks could be an effective treatment to enhance the self-concept of abused children living in a residential [c]are facility" (MacDonald & Howe, 1989, p. 250). In calling for further research, the authors wondered what role the debriefing played in improving self-concept and what impact more traditional recreational games with an added debrief might have on self-concept.

Hazelworth and Wilson (1990) used the Tennessee Self-concept Scale to evaluate four sessions of an outdoor adventure camp in North Carolina. The instrument was given either side of

the first six days of what was a nine day camp. During these six days, subjects (39 boys and girls aged from 12 to 15) in four session groups (unreported, but obviously small sample sizes) prepared for a final three day expedition by learning a series of outdoor skills. The final three day trip differed for all four sessions (mountain camping, whitewater canoeing, sailing and coastal expedition) and so it was not included in the study. The first six days were relatively consistent across all four sessions in terms of outdoor skills (group initiatives, ropes course and camping), but differed in terms of philosophical focus. Session #1 stressed group cooperation and respect for others through camping and orienteering. Session #2 focussed on cooperation through small group "family-style" campouts and canoeing. Session #3 saw campers signing a contract agreeing to standards of behavior during small group living. Session #4 included the same contract, but changed the living arrangements from "family-style" to large group "social-style" camping. For the nine self-concept categories covered by the Tennessee Self-concept Scale, none changed in session #1 (group cooperation and respect for others). An increase (better self-concept) was noted for the family category in session #2 (cooperation through small group "family-style" living). Positive changes were similarly noted in the moral-ethical and family categories for session #3 (signed contract and small group "family-style" living). Lastly, the categories of moral-ethical and social showed positive shifts for session #4 (signed contract and large group "social-style" living). After emphasizing the flaws of their study, the authors concluded "that the structural organization of a camp directly affects the self-concept of participants in certain areas. Further investigation into the influence of different camp organizations [and structures] on specific areas of self-concept would be of great help to camp directors" (Hazelworth & Wilson, 1990, p. 36).

Gillett, Thomas, Skok, and McLaughlin (1991) applied the Tennessee Self-concept Scale and the Coopersmith Self-esteem Inventory to a treatment group of 61 high school students from British Columbia. Their control group consisted of 16 classmates who chose not to attend the outdoor education program (indicating an obvious bias in a self-selected sample). The treatment for this study was six days of backpacking at moderate altitude in the rugged Canadian Rockies, with the instrumentation being administered one week before and two weeks after the trip. With established pretest score equivalency and homogeneity, no changes across the treatment period were found for the control group, while the treatment group showed significant enhancement of self-concept on the identity and behavior categories of the Tennessee Self-concept Scale and on the general and total scales of the Coopersmith Self-esteem Inventory. Despite tabulated data which seem to somewhat misrepresent the statistical outcomes, the researchers confirmed that "there appears to be enough evidence in the present study and collectively in the literature to indicate changes in self-concept can occur as a result of participation in a short-term or a long-term wilderness experience" (Gillett et al., 1991, p. 42).

Most of these studies had one thing in common: uncontrolled extraneous variables. Without rigor, this research failed to "prove" causality, but was sufficient in establishing a difference between outdoor education and other educational programs or no programs at all. Maybe just being away from the usual routine (school, home or work) was enough to improve a person's self-concept!

This same criticism was levelled by those more familiar with the body of knowledge prior to 1982 (Iida, 1976; Richards, 1977; Shore, 1977). Ewert (1983) summed up their points neatly with his own comments:

Despite a number of studies which contained flawed designs or reported negative findings, the preponderance of research literature supported a belief that Outward Bound [or a related outdoor adventure education program] can positively enhance an individual in a variety of ways, i.e., self-concept, self-esteem, locus of control,....A powerful suggestion is made that Outward Bound [or a related outdoor adventure education program] does something 'good' to or for the participant, but like electricity, we know it does something, but we're not sure how it does it (p. 27).

The addition of my words "[or a related outdoor adventure education program]" to Ewert's comments above, points out the need for at least one more study of differentiation: the comparison of Outward Bound programs' impact on self-concept with that of additional outdoor education programs, including the so-called "Outward Bound spin-off" programs. Nevertheless, these studies fall well short of the pyramid's apex: Can we control the enhancement of self-concept?

Studies of Relationships and Studies of Influence

Comparative studies, (e.g., Marsh, Richards and Barnes, 1986a; 1986b) have taken a step toward noting the relationship and influence that time has on self-concept in an outdoor education program. These researchers gave the Self-Description Questionnaire (SDQ) III to a total of 361 subjects (75% male), ranging in age from 16 to 31, who participated in one of 27 groups in 10 Australian Outward Bound courses. Subjects completed the instrument one month before their course (Time #1), the first day (Time #2), the last day (Time #3) of the course (348 subjects completing all three rounds), and 18 months later (Time #4: where 229 or 63% of the original subjects completed the fourth round). The Self-Description Questionnaire III has thirteen sub-scales (as determined by factor analyses). Means for 1 of the 13 sub-scales (emotional) increased and 5 of the 13 sub-scales (verbal, academic, problem solving, physical abilities and appearance) decreased in advance of the first program day (from Time #1 to Time #2). Both shifts were attributed to the growing "proximity of a challenging or stressful experience" (Marsh et al., 1986a, p. 199). All 13 sub-scales increased over the program period (from Time #2 to Time #3), where the pattern was attributed to the Outward Bound program and was found to be present in almost all of the 27 groups (changes in same and opposite sex peers were not noted for identical gender programming). After presenting overwhelmingly positive findings and strongly convincing arguments for the lack of control group versus the viability of a time series design, the researchers posulated a post group euphoria (PGE) bias. "There are two separate issues related to a possible PGE bias: first, whether the inferred short-term effects of the program and the self-concept responses are valid... ..and second, whether the program effects are maintained over time, based on the assumption that a PGE is short-term" (Marsh et al., 1986a, p. 201). In the follow-up study (Marsh et al., 1986b), the long term impact of the Outward Bound program on self-concept was considered. Of the 13 self-concept sub-scales elevated after participation in the program; 8 remained elevated, 2 continued to improve (physical abilities and opposite sex peers) and 3 dropped off (parents, honesty and emotion). These minor variations were explained as vestiges of maturation as subjects grew out of adolescence into adulthood. Although a PGE bias could not be totally ruled out, the authors summed up their works thusly: "a powerful intervention specifically designed to affect self-concept was shown to influence responses to the SDQ III significantly; the largest effects were observed with the dimensions chosen a priori [by the OB school director] to be more relevant to the goals of the program; and these changes were maintained 18 months after the completion of the program" (Marsh et al., 1986b, p. 490). Clearly, this study pointed to the need for further studies of a times series design.

No other recent research could be found that considered any of the relationships and influences among program elements, such as duration (day, week or month long programs), location (urban, rural, primitive or wilderness), facilitation (style, format or content), activities (group initiatives, ropes courses or outdoor pursuits), sites (residential or backcountry), and mix of participants (gender, disability, or race). Clearly, if work in the arena of self-concept is to progress, beyond knowing that the electricity works, and toward knowing how it works, we need to establish these causal connections. We must also consider the relationship between self-concept and any related human behaviors such as confidence, risk taking, competence, dealing with fear and coping with anxiety. Lastly, we need to better understand the aspect which permit transfer of improved self-concept from the adventure back to daily living, as March, Richards and Barnes (1986a, 1986b) tried: what about self-concept transfers, how much, for how long, and due to what

program elements? In combination these links should permit us to establish causality at a higher level of understanding.

Studies of Discrimination & Regression and Studies of Experimentation & Causality

Until we know which components are in the mix, by studying relationships and influences, we will not be able to determine how they should be combined and in what proportions. This latter desire falls in the realm of discrimination, regression, experimentation, and causality. Needless to say, no studies of these types were found in lengthy computer searches of four extensive databases. If we knew the contributory components which enable self-concept to improve during an outdoor education experience, then we could devise path analyses type studies to help trace the order and means by which the components contribute, thus permitting us to establish a causal process.

In summary, a broad and deep descriptive base exists for research in self-concept and outdoor education. Limited and flawed studies have shown that something about outdoor education or adventure programming appears to enhance self-concept, but we have little evidence to claim that we are certain what it is. Beyond this reasonable foundation, a few notable researchers have attempted to erect support structures, but some have been built on thin air. Sadly, the self-concept and outdoor education scene has not grown in the past decade. The state of the art is still stagnant: save one or two refreshing new studies. Our research is still operating at the describing and differentiating levels: we have not moved on and built upon what we knew ten years ago. Perhaps new directions are warranted. Perhaps we should consider constructs other than self-concept.

New Directions for Research

In terms of "what needs to be known" about individual and personal growth in outdoor education, the construct of self-concept is over worked. Past work by Wright (1982) confirmed the existence of many dimensions of self-concept, each being influenced in a different way by outdoor education experiences. Additionally, the transferability of self-concept ought to be limited by being so heavily dependent on the situation and the need for metaphor (Gass, 1985; 1991). A study by Iso-Ahola, LaVerde and Graefe (1988) suggested that while climbers gain specific perceived competence at rock climbing, they do not necessarily translate that gain into general perceived competence at life. Because I feel good about myself as a kayaker, this does not necessitate good feelings about myself when it comes to public speaking or sharing my creative ideas with others since the risks are plainly different. Aspects other than self-concept are likely to transfer more easily such as stress coping mechanisms as one example.

Instead of studying the global self-concept, we should be looking to examine more particular constructs of self. We should ask what is the greatest individual benefit participants can take away from an outdoor education experience? I would answer it is the personal certainty that they can succeed, in the face of situational uncertainty; if they have confidence in themselves and are willing to take a risk! Therefore, I believe that further enlightenment may be found in the study of self-efficacy (Bandura, 1977), effectance and competence motivation (Harter, 1978; White, 1959), risk taking, fear and anxiety (Ewert, 1986; 1988). Several authors have suggested these connections (Allen, 1987; Ewert, 1989; Harmon & Templin, 1987) and at least a couple of researchers have taken descriptive steps in this direction (Cockrell, 1987; Parle, 1986). Klint suggested that:

Further probings into how self-concept is affected through the adventure experience should start with theoretical frameworks. However, quantitative research relies on theories that are testable and can be broken down into variables.... very few theories of self-concept meet these requirements. Fortunately, there are a few testable theories that include a self-concept component in their explanation of another human phenomenon such as motivation.

These theories may be useful as a starting point for understanding the process of self-concept development in the adventure experience. (1991, p. 165)

She went on to note and described in detail the efficacy theories of Bandura (1977), White (1959) and Harter (1978). According to Klint, "inquiry into the adventure experience needs to move into the next stage, from describing the product to understanding the process.... inquiry needs to move forward toward an understanding of how the adventure experience influences human perception and behavior" (1991, pp. 169-170). She concluded her treatise by noting that these theories and the models of other social psychologists can serve as a starting point for our work.

Several such theories and models have recently arisen in the research literature. Based on the optimal arousal theory of play behavior (Ellis, 1973), flow theory (Csikszentmihalyi, 1975; Csikszentmihalyi & Csikszentmihalyi, 1991), and various other writings (Mitchell, 1983; Mortlock, 1984), Martin and Priest (1986) proposed the Adventure Experience Paradigm. The Adventure Experience Paradigm is a research tested view of how risk and competence dynamically interact in blended proportion to provide varying conditions of challenge, which change over time according to reality and the perceptions of participants in the adventure experience (Carpenter & Priest, 1989; Priest, 1987, 1991; Priest & Baillie, 1987).

Ewert & Hollenhorst (1989) have proposed the Adventure Model: a research tested view of how level of engagement in an adventure is dependent on a mix of individual attributes such as frequency of participation, skill/experience level, locus of control and of activity/setting attributes such as risks, social orientation and environmental orientation. A recent combination of these two theories (Priest, 1992) provides for an evolving truth of how individuals experience an outdoor adventure. Building new theory from old is a powerful and effective way to evolve the profession, provided research is employed to "test" the waters of any new ideas.

Furthermore, such combination of theories from other disciplines will undoubtedly shed new light on our understanding of personal and individual growth in outdoor education. For example, Harter's (1978) research on competence motivation evolved from White's (1959) efforts on effectance motivation. Although Harter's work was applied to children, her efforts appear to have found new application in both the fields of sport psychology and outdoor adventure (Klint, 1991). Additionally, Harter's theory provides a path for analyzing the contributions of key components to competence motivation and mastery attempts, thus tying in nicely with the notion of self-efficacy (Bandura, 1988). The next logical step is to combine her model with those noted above and to research the resulting theories at the third and fourth levels of the pyramid, thus helping to tie everything together and to begin building a unique body of knowledge regarding personal and individual growth through the field known as outdoor education.

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Report from the Individual / Personal Development and Growth Group

Simon Priest and Alan Ewert

Fifteen researchers gathered for two hours to discuss the directions of future research in outdoor education concerning individual or personal growth and development. To begin, we brainstormed a list of twenty five constructs believed to be impacted by outdoor educational programming. Each researcher then "voted" for those constructs deemed to be of greatest importance or in need of more research. The four concerns of self-efficacy, coping with stress, behavioral changes, and transference issues topped the list. The discussion which followed centered on what we know about these four concerns, what we need to know about them, what our central research questions ought to be and how we should go about answering these questions. Recommendations were as follows:

1. Conduct more research focused on the impact and lasting effect of outdoor education on self-efficacy and on the long term transference of specific changes in self-efficacy to more general or to other specific efficacy situations.
2. Conduct research to track changes in observable behaviors such as: scholastic achievement, attendance, recidivism, DSM criteria, productivity, treatment levels, vandalism, disciplinary instances, depreciative statements, skill acquisition, and the frequency or quality of social interactions.
3. Conduct research to determine the key program attributes, and the best combinations of these attributes that contribute to the behavioral changes. Program attributes might include: environments, activities, sequencing, facilitational styles, and the ethnicity, culture, gender and age of subjects.
4. Research needs to incorporate more base-line data, before and after treatment, by including more single subject or group time series designs.
5. Research needs more participant observation using clinical practitioners outside the outdoor field and more observer reported rather than self-reported measures.
6. Researchers need to be tolerant and accepting of alternate paradigms of inquiry and need to mix quantitative and qualitative methodologies.
7. The building of new theory and testing these models should be a priority. Modelling must be multivariate and the use of regressive prediction and structural path analyses (like LISREL) ought to be a consideration.
8. Instrumentation must have established trustworthiness and researchers are encouraged first to seek out existing instruments, and second to create instruments specifically designed for outdoor situations. Instruments need to be tested for validity, reliability, factor structure, and other such considerations.
9. Researchers need to begin tapping funding sources such as the Forest Service (grants in tourism, urban forestry, and leisure benefits), drug-free school money, corporations, OSAP, Department of Education (special education and training), and potentially the National Parks Service or the Department of the Interior.
10. Lastly, as a profession, either under the auspices of CEO or under the umbrella of another organization like AEE, a clearinghouse must be established for sharing instrumentation, funding sources, and opportunities for publication or presentation of research results.

Keynote Presentation

**A Bigger Piece of the Puzzle:
The Restorative Experience and Outdoor Education**

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Since I cannot hope to encapsulate even a fraction of research on human/environment interaction, I am going to take a slightly different approach than the other speakers. I would like to focus on a theoretical perspective for thinking about that interaction and why outdoor education really matters ... more, perhaps than any of us ever fathomed.

Imagine for a moment that this conference is in Detroit, in a large hotel near the interstate and the hustle and bustle of downtown. We are guaranteed an exciting nightlife. The hotel has an exercise room, a sauna, and our meeting room is just two floors down from our rooms. We all have tvs and telephones in our rooms; a few of us even look out on an expanse of lawn.

Would your experience of this symposium be any different there, even though we would still be together, talking about the same things? I venture that few of us would leave the two settings feeling the same. Actually, some of you might not have been so interested in coming had you known this conference was at a Howard Johnson's just off the interstate. Many of us sort of "know" there would be a difference, but can only articulate that generally. It is more relaxing, quiet and serene here; there are fewer distractions. Bradford Woods is a getaway.

I also wouldn't be surprised if most of us will leave here feeling more rested, maybe even a little more ready to take on the world than if we had met in Detroit. And I suspect that those of you who find time to do some walking, quiet gazing out the window, or bird-watching may even find yourselves reflecting on some of life's "bigger issues."

The psychological perspective taken here argues that the natural environment can play an invaluable role in enhancing our everyday well-being, our receptiveness to other people and to learning, and, at the risk of sounding grandiose, our overall quality of life. The fact that your classroom is the outdoors has tremendous impacts on human welfare. As outdoor educators, you have a handle on something far more powerful and essential than you ever dreamed. That something is the "restorative" experience. First, I would like to talk about what the restorative notion is and how it came into being, then I will describe 4 components of that experience and, finally, suggest some research directions and implications.

Restore from What?

An understanding of the restorative experience requires first, an understanding of what it is we are being restored from. Just as our bodies become tired when we exert them, so do our minds. More accurately, our directed or voluntary attention fatigues. Think

of how you feel after working hard at a project, sitting hours in front of a computer screen, driving through a traffic jam, or being a caregiver. Whether it is enjoyable or not, anything we do that requires ignoring distractions in order to focus on something takes a toll on that mental resource. Our language is full of descriptors for the fatigue that we all experience -- "wiped out," "spacey," "zoned out," "brain-dead," and "fried." A restorative experience is an opportunity to rest and revive that directed attention mechanism. Again, our language is wonderfully evocative: we "chill out," "get away from it all," and "unwind."

The Costs of Mental Fatigue

While most of us manage day to day, the daily stresses, hassles and just living in a modern urban society, tax us tremendously. Think back to the end of the term or perhaps just that last push at work before the holidays. People seemed more irritable and impatient. I found myself making mistakes, more anxious, easily distracted, and having trouble keeping track of things -- mentally fatigued.

Studies have noted the impacts of fatigue on the reliability of air-traffic controllers, the decision-making of overworked physicians, the productivity of workers. As educators, many of you can appreciate the costs of having students who cannot focus on task, who are distracted and irascible. We can go back to our conference in Detroit. Urban settings are typically full of distractions, places where one needs to maintain vigilance and carefully monitor social interactions. Perhaps there is a connection between mental fatigue and the violence we see there. Mental fatigue is remarkably pervasive; many of us are not finding adequate opportunities to rejuvenate our psychic resources.

What Do We Do to Recover?

Rejuvenation for directed attention is a matter of allowing it to rest. Of course, we can sleep. Or, we can shift our attention to something else. Watching tv, going to a bar, walking in the woods, reading a book, painting, going to a football game: a quick assessment of these examples suggests that some settings and activities will do a better job than others of allowing us to rest our directed attention.

The most effective environments are those that engage another mechanism, involuntary attention. This attention is what keeps us staring at the fire, the cascade of the waterfall, or animals playing. William James' (1892) description for involuntary attention evokes the intuitive appeal of these things, and provides a good start on what in evolutionary terms probably really mattered to humans, "strange things, moving things, wild animals, bright things, pretty things, metallic things, words, blows, blood, etc., etc." So, when this involuntary attention is engaged by inherently fascinating, interesting stuff, our directed attention, the mechanism we use to monitor and function in the world, can rest.

For some, the normal rhythms of their life and their environment are such that sleep is enough to recoup from daily mental expenditures. Many of us today, however, are so far removed from potentially restorative settings and deal with enough distractions and pressures, that sleeping each night does not provide adequate recovery. If some settings are more capable of providing those kinds of opportunities than others, are there some systematic characteristics or factors that these restorative environments would have?

The Restorative Environment

Empirical research over the last 15 years has led to development of theory suggesting just these characteristics (Kaplan & Kaplan, 1982; Talbot & Kaplan, 1986;

Kaplan & Kaplan, 1987; Kaplan & Kaplan, 1989; Kaplan & Talbot, 1983). This research has shown that, while any number of environments can do the job, natural settings are incredibly effective at providing opportunities for mental recovery.

Although in hindsight, this seems intuitive, the restorative notion emerged as a surprise. The research program, called the Outdoor Challenge Program was fashioned after the Outward Bound experience, but eliminated some of the more strenuous, stressful aspects of the Outward Bound. Participants kept journals and filled out pre and post-test surveys. While the researchers were looking at the benefits of the outdoor experience, results showed some unexpectedly profound, long-lasting impacts. Very briefly, participants reported feelings of tranquility, sense of different priorities, a respect and awe for nature and of being a part of something bigger.

From the recognition of this impact, the Kaplans (1989) identified four components of settings that support a restorative experience:

1. Being Away: the setting is removed from the everyday environment
2. Extent: that setting is "big" enough to feel like a different environment
3. Fascination: the setting has inherently interesting stuff going on
4. Compatibility: one feels a sense of belonging. An Irish saying, "may the wind be at your back" characterizes such a setting -- it facilitates pursuing one's

purposes.

No one factor is enough. Perhaps a useful way to understand their relationship is to look at each in more detail and see how it contributes to, but alone cannot ensure, a restorative experience.

Being away entails going into an environment removed from one's everyday life. This being away can be physical -- going to another place, or conceptual -- immersing oneself in another world. Is being away enough? Certainly, it captures the notion of escape as used in recreation literature. However, if all we needed was escape, it should be just as effective to lock oneself in a closet as to backpack in the mountains. There must be more....

The notion of extent (another world) is closely related to being away -- there needs to be enough of that environment that one feels somewhere else. Extent does not refer to physical size, per se; one can hike for miles only to find a paved road or be passed by a snowmobiler. Rather the setting needs to have enough coherence that it seems like another world, without inconsistencies that "break the spell." For example, I can remember biking along the Hudson River north of New York City. Even though there were major highways above and below me, I felt in another time and another world. With some help, one can see a whole world in a vacant lot or a telescope.

Extent also incorporates a time element. Some of the more profound restorative impacts take time. In the Outdoor Challenge research, participants did not report feeling "quiet" enough to reflect until several days into the experience. Likewise, the ride along the aqueduct or the exploration of a vacant lot are limited in terms of the amount of time one can spend within them before other aspects of the surrounding area begin to intrude.

While combining extent with being away may bring us closer, the two provide no assurance that an environment will not be boring, or noisy, or frightening -- all of which tax our directed attention. What happens if we add fascination?

Fascination brings in involuntary attention. Having some fascination in an environment means that while aspects of the setting engage us, at the same time they do not require that we use our directed attention. Some kinds of fascination are completely

engrossing. We are drawn to them almost in spite of ourselves — blood, violence, captivating vistas. This is only one facet of fascination, however.

Fascination relates to process, too. People like to learn things that help make sense or expand our understanding of our world. People enjoy puzzles or finding out what is just around the corner. From a mental attention perspective, it is important that this fascination be connected to what matters in one's environment. If not, we find ourselves fighting interesting distractions — television, for example.

At this point, then, we have three characteristics: being away, extent and fascination. Are they enough to provide a restorative experience? Clearly we are getting close, but what about this conference....if it was in Detroit? There seems to be something still missing.

As mentioned above, it is important that what matters in one's environment is what one finds interesting and engaging. Compatibility applies this relationship to our actions and inclinations; we feel we are in a place where we belong, where the environment supports doing what we want and need to do. Contrast this with the frustration of an incompatible environment, like trying to read in a noisy library.

It becomes much easier to see the unique role nature plays in the restorative experience once compatibility is added to the picture. NATURE IS SPECIAL, in that it can provide this kind of experience for so many people. Restoration in nature speaks to the poetic. Mary Oliver (1983) ends her poem "Wild Geese":

Whoever you are, no matter how lonely
the world offers itself to your imagination
calls to you like the wild geese, harsh and exciting --
over and over announcing your place.

Note: This paper has focused on the attentional aspects of the restorative experience. As this poem suggests, another striking benefit of a restorative setting is the opportunity for self-reflection it offers.

The Restorative Experience and Outdoor Education

So, where are we? I have argued that it is critically important to humans to have settings in which they can rest their directed attention. While we manage or cope in settings that do not provide these opportunities, there are costs, both socially and personally. If we care about how people interact, think, and quality of lives they lead, it is essential that we address issues of mental fatigue.

Outdoor educators are in an ideal position to help people find and enjoy such environments. One of the most effective restorative environments is your area of expertise. The implications for you as educators are tremendous. It is hard to share information with some one who is already mentally fatigued, but if we can help learners to:

feel somewhere else — conceptually or physically (**being away**),
such that it seems like a another world (**extent**),
and if we can engage their interest and curiosity about things that help build on what
they want to know (**fascination**), and
and that matter to them...(compatibility),
we may find that we have offered an incredibly powerful educational experience as well.

Research Implications

Obviously, this framework presents any number of research directions. The following examples suggest some that are especially relevant to outdoor education:

1. Can we empirically demonstrate the relationship between a restorative outdoor experience and enhanced learning and retention?
2. How does one facilitate a restorative experience?

Such questions touch on several aspects of outdoor education. Compatibility has to do with being able to do what one wants to do. Having or developing skills that facilitate one's functioning in an environment play an important role in the restorative experience. Fear of the woods, a sense of helplessness or incompetence need to be allayed to allow for a restorative experience.

The Outdoor Challenge study underplayed physical hardship and a focus on social interactions. How do different activities and "goals" during the outdoor experience impact restorative benefits?

- 3) Does a restorative experience differ for different populations?

We could look at the impact of a variety of outdoor environmental activities on mental fatigue across different populations. Studies have already demonstrated the impact of restorative activities on those with life-threatening diseases. For example, breast cancer patients who engaged in outdoor restorative activities reported quality of life improvements and tended to initiate more projects, than those who did not (Cimprich, 1990).

In a study of burnout among AIDS caregivers, individuals were most benefitted by quiet activities, especially nature activities which seemed particularly conducive to reflection. Those who passed time watching tv or playing or watching organized sports, on the other hand, appeared to have reduced competent functioning and resistance to burnout (Canin, 1990).

Does a nature experience or access to natural settings help inner-city youth handle the pressures of the ghetto? Are there certain kinds, time-frames, activities and settings that are more effective than others?

Conclusion

The importance of establishing a coherent research agenda for outdoor education cannot be underplayed. Being able to empirically support ways in which the outdoors provides a remarkably effective setting for restoration of mental attention provides a compelling argument for maintaining access to the outdoors -- both near and far.

From this perspective, nature is no longer simply an amenity; it is one of the few resources we have that can offer so many benefits at so small a price. Yet, it is also a resource that will be extremely difficult to recover if we only recognize this when it is gone. We need to build a body of evidence that argues for access to natural outdoor areas and opportunities as central to promoting human well-being.

I'd like to leave you with a thought. Imagine again (I doubt it will be difficult for many of you because you do it all the time). Imagine taking a group -- perhaps of business people, stressed, looking for some release, some of them already counting the days before they need to be back. Or, perhaps it is a group of inner city kids, frightened by the prospect of the woods, angry street kids, but energetic and eager for a day's adventure.

How can we use this framework and the components of a restorative experience to inform and guide their experiences so that they leave us not only having had a good time, but also experiencing some of the longer lasting and more profound benefits that environment can offer?

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Summary of the Human/Environmental Interaction Discussion

Karla Henderson and Lisa Bardwell

What We Know?

Intuitively we know a lot about the value and importance of the interaction between humans and their outdoor environment. The empirical and theoretical basis for that knowledge, however, is spotty and fragmented. We do have empirical research on environmental preference, the impact of human use on the environment, and the impact of the environment on humans (physically, psychologically). While we know that "nature matters" our understanding of the spiritual/philosophical dimensions of that interaction has not been systematically studied. The notion of the restorative environment offers a theoretical vantage that may be useful in understanding some of these parameters.

What We Don't Know

There is, however, much we don't know. For example, in terms of the impact of the outdoors or outdoor experiences on people:

1. What are some of the impacts both short term and over the longer term? (a realm we hope the "individual" folks figured out.)
2. What is the extent of the impacts in terms of:
 - a) kind of environment (are there differences if one does a ropes course in the city or a natural setting?)
 - b) time frame/time spent in a setting?
 - c) the sequencing of activities?
3. What are other influences we must consider (e.g., developmental, cultural)? We need to better understand the linkages between outdoor education and adventure education.

What do We Want to Know?

Clearly, there are many questions we can and want to ask. We cannot hope to answer all of the questions in the immediate future. But we need to start somewhere. We could identify a framework(s) that will help us see how we might address the many pieces of the human/environment interaction. The restorative concept, for example, might provide a starting point for developing a research focus. One very timely and pragmatic approach would be to focus on how outdoor education connects with other disciplines. What insights can we offer that others might want to hear (and fund)?

What are Some Research Methodologies?

It is difficult to identify research methodologies without having formulated the research questions. No matter what approaches we take, it is critical to assess:

1. What are some of the impacts are we interested in looking at?
2. How might we best measure/document these impacts?

Certainly, many kinds of research methods will be needed to explore these relationships. Perhaps more important than the specific methodologies will be the thoughtfulness, careful planning and thoroughness with which we conduct that research.

Keynote Presentation

Research In Outdoor Education: Group Development And Group Dynamics

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Much of the practical and scholarly attention in outdoor education has focused on the individual and personal growth dimensions of outdoor education processes and experiences. Outdoor education, however, is usually not a solitary process. It happens in the context of a course, a trip, an outing, a lesson, a group. Practitioners in the field know that what happens within and to that group is one of the major influences on the personal growth dimension. The group is the milieu in which the personal growth processes happen. Research indicates that for participants in some outdoor adventure programs "the group" was the highlight of the experience. Anecdotal evidence from outdoor leaders and educators indicates that for participants in outdoor education programs, most lasting impressions about the program revolve around the success or failure of their group. Most outdoor leaders can recount programs or trips where everything went according to plan (the weather was great, all agency goals were reached, all lessons were a success, and all tasks were accomplished). But, if the group dynamics did not work the participants left the program disappointed because something about the experience just did not live up to their expectations. Conversely, leaders can recall other programs or trips where everything seemingly went wrong (inclement weather, poor food, tasks or goals not reached, lessons not completed) and yet if the group experience was positive, the participants loved the program, left fulfilled, and were ready to return for another experience.

A number of writers in the outdoor education field have claimed that group development and group dynamics are the cornerstones of outdoor and adventure education (Brower & Brower, 1980; Buell, 1983; Ford & Blanchard, 1985; Kalish, 1979; McAvoy, 1987; Mitten, 1986; Walsh & Golins, 1975). The purpose of this paper is to explore the literature to see what we know about group development and group dynamics in outdoor learning environments and programs, what we know about relationship development between two or more individuals in outdoor programs, and how groups of individuals interact in such situations. Another purpose of the paper is to evaluate the level of understanding we have about groups in an outdoor education context and to provide a qualitative opinion on the status of research in this area. Lastly, another purpose of this paper is to suggest areas of research that are needed to advance our understanding of group development and dynamics in outdoor education.

Most outdoor education practitioners work with groups regularly. The more one understands about group development and dynamics, the more one can maximize the constructive aspects of groups and minimize the destructive ones. To promote effective group functioning, one needs to know what an effective, positive group is and have the group skills necessary to enhance group effectiveness. It is hoped that this review of literature will assist outdoor education practitioners and scholars in that process.

The sources used in this literature review included personal reviews of texts in group dynamics and in outdoor/adventure/experiential/wilderness education, reviews of the major journals and professional publications in these areas, and personal contacts with scholars in these topic areas. We also consulted a number of library data bases including ERIC, PsycLIT, and DISSERTATION ABSTRACTS (using key words outdoor education, wilderness, experiential education, group dynamics, and communication).

Groups, Group Dynamics, and Group Development

Before presenting literature on groups in the context of outdoor education, it will be beneficial to present some common definitions and information on groups from the psychology, sociology, and communications literature. The field of group study is interdisciplinary and covers a wide range of literature. We found that the most useful sources for an understanding of groups, and how outdoor education scholars could transfer this information to their work, were group dynamics and theory texts by Cartwright and Zander (1968), Corey and Corey (1992), Forsyth (1990), Johnson and Johnson (1987), Napier and Gershenfeld (1983, 1989), Olmsted and Hare (1978), and Shaw (1971). The text by Forsyth was particularly helpful in understanding definitions, theories and recent trends in group understanding and research.

There are a number of definitions of a group in the literature. Forsyth's (1990) definition of a group, and the definition used throughout this review, is that a group is two or more individuals who influence one another through social interaction. The key component to this definition, and to most others found in the group literature, is social interaction--relations to one another, face to face communication, influence, status, and roles. The literature also reveals a number of characteristics that define a group. Again, Forsyth's list of characteristics of a group seem appropriate for outdoor education. These characteristics are:

- **Interaction:** Patterns of mutual influence that can be physical, verbal, nonverbal, emotional.
- **Structure:** A stable pattern of relationships including roles, norms, intermember relations.
- **Goals:** Intrinsic or extrinsic reasons for the group's existence.
- **Cohesiveness:** The perception that the group is a unified whole rather than simply a cluster of people in physical proximity of each other.
- **Dynamic interdependency:** A developmental process with a beginning, stability, disruption, and change over time.

"Group dynamics" as a term was developed and popularized by Lewin (1951) when he applied Gestalt concepts to the study of groups and found that the whole was greater than the sum of the parts. The behavior of the group member is determined by the interactions of the individual's personal characteristics with environmental factors, which include features of the group, the group members, and the situation (Forsyth, 1990). There are also numerous definitions of group dynamics. Two of the most prolific researchers, Cartwright and Zander, define it as "...a field of inquiry dedicated to advancing knowledge about the nature of groups, the laws of their development, and their interrelations with individuals, other groups, and larger institutions" (1968, p. 7). We have chosen in this review to use Forsyth's simpler definition, which holds that group dynamics is the study of the behavior of groups. Favorite topics of researchers in group dynamics have been group development, leadership, group performance, and interaction (Bales, 1965, 1980; Hare, 1976; Schutz, 1958).

"Group development" is defined as the patterns of growth and change that occur in groups throughout their life from formation to dissolution (Forsyth, 1990). Over 100 theories have been proposed by group researchers seeking to describe the kinds of developmental changes seen in most groups. There appear to be three main categories of these developmental theories: sequential stage theories, recurring phase theories, and cyclical/synthesis theories. The sequential stage theories describe a typical order of the stages a group goes through in its developmental life cycle. For example, Tuckman (1965) describes four stages of development as: the forming stage, where group members meet and begin learning about each

other and group tasks; the storming stage, where the group members sort out individual roles and deal with issues of power and decision making; the norming stage, when group members establish individual roles and the group generates its own norms and patterns of interaction; and the performing stage, where the group accomplishes its goals and tasks as a cohesive unit. A fifth stage often added to this model is transforming or adjournment which is the process of disbanding the group (Tuckman & Jensen, 1977). Jones proposed a four stage model and labelled the stages as dependency, conflict, cohesion, and interdependence (1973). Garland, Jones and Kolodny proposed a five stage model, with the stages being pre-affiliation, power and control, intimacy, differentiation, and separation (1973).

The recurring phase theorists believe not only that certain issues tend to dominate group interaction during early phases of development, but that these issues can occur later in the life of the group as well. As an example, Bales' equilibrium model holds that group members strive to maintain a balance between task oriented actions and emotionally expressive behaviors (1965). The group tends to oscillate back and forth between these two concerns. Most recent theorists recommend a synthesis of the stage and phase approaches, this has been called the synthesis or cyclical approach. As the group goes through various stages, basic themes tend to become relevant at certain times and must be dealt with by the group. These themes include anxiety, power, norms, relationships, and personal growth. Because the issues underlying the themes are never completely resolved, the stages and phases can recur (Forsyth, 1990).

Research in Group Development and Dynamics in Outdoor Education

Since group development and group dynamics are such interdisciplinary topics, it seemed logical to try and establish a method of categorizing the topics and the research to make the literature search more manageable and to make the presentation of the resulting information understandable. We adapted a classification system developed by Weber (1982) and modified it to fit the topics relevant for outdoor/adventure/experiential/wilderness education. This adaptation resulted in a list of general dimensions or topic areas of research and information. We then used the group dynamics literature to generate a list of specific topic areas within each dimension area and went to the literature to see if research was available on those topics in the context of outdoor education. Some of the topic areas and dimensions overlap, and some research articles address more than one topic. The authors attempted to reduce duplication and so the focus of this report is on the primary studies found in each topic area. The remainder of this paper is a report of the literature found according to this classification system. The general dimension categories we established were:

1. **Individual and Personal Dimensions:** How do the personal characteristics individuals bring to groups influence group dynamics and development?
2. **Group Process and Structure:** How do groups develop and operate, how do process and structure influence groups?
3. **Group Functions and Tasks:** What is the relationship between functions and tasks in groups, do groups operate differently according to functions and tasks?
4. **Leadership and Power:** How do leaders and leadership influence group development and dynamics?
5. **Environmental:** How do forces from outside the group influence group dynamics and development?

Tables 1-4 list the first four dimension categories and list specific research topics within each dimension. This review did not include the "environmental" dimension because it was included in the environmental research topics paper in another section of this symposium.

Individual and Personal Dimension

The topics in the individual and personal dimension (Table 1) have received little attention in the outdoor education literature. We looked at the literature trying to find studies that showed if or how these dimensions influenced group dynamics and group development in outdoor education programs or environments. As an example, does the literature tell us

anything about how an individual's intrapersonal or introspective capabilities influence group dynamics in outdoor education, or a person's coping skills, or a person's gender? Although we found little research addressing any of these topics we did find some information related to gender, age, and ability/disability. Henderson and Bialeschki (1991) have suggested that gender plays an important role in leisure patterns. Dickie (1990), Hardin (1979) and Mitten (1985, 1989) used anecdotal and experience based observation information to suggest that gender influences group dynamics in outdoor education. Fox (1990) found that young girls were typically discounted by their male peers in an environmental education simulation for junior high students. This made the group less accessible for the girls. Van Hove (1990) used a standardized measure in determining that gender impacts group interaction and cooperation. Conversely, Ewert and Heywood, in a recent study (1991) of Outward Bound participants, found no significant gender differences in levels of expectation of group development or in the actual realization of those expectations during the trip. There also were no significant differences according to age of participants. McAvoy and Schleien (1988) and McAvoy, Schatz, Stutz, Schleien and Lais (1989) found no significant differences in group development or group interaction according to ability/disability (physical or developmental) in integrated outdoor education or outdoor adventure programs.

TABLE 1. Individual/Personal Dimensions

Personal Factors	Role Choice	Intrapersonal/Introspective Capabilities
Past Experience		
Family of Origin		
Gender		
Class		
Ethnicity		
Diversity		
Ability/Disability		
Social Skills		
Age		
Coping Skills		

Group Process and Structure Dimensions

The group process and structure dimension topics (Table 2) have received some attention in the outdoor education literature. Much of the writing has been reports of models for practice, but there also has been some empirical research. On the communication topic, Mason (1987) described the potential benefits of increased intimacy and communication among family members on wilderness experiences. Neumann (1989) and Neely and Kling (1987) found increased communication capabilities in college students and adolescents respectively as a result of experiential-adventure based experiences. Harris (1985) studied interaction patterns of adolescents in school and recreation settings and found some differences between outdoor education and outdoor recreation settings. Stoltz (1989) conducted a major literature review of communication in the training and development and Outward Bound literature as part of a study of Outward Bound

Training and Development courses. In his data based research he found no significant increase in communication skills as a result of participation in such a course.

TABLE 2. Group Process/Structure Dimensions

Norms	Processing
Conflict	Sequential Stage Models
Roles	• Jones 4 stage model
Communication	• Tuckman 5 stage model
Special Groups	• Garland, Jones, Kolodny model
Problem Solving Ability	Recurring Phase Model - Bales
Cohesion/Non-Cohesion and Team Building	Cyclical Synthesis Model
Authority/Hierarchy Structure	

The cohesion/non-cohesion and team building topics have been a major emphasis of adventure/ experiential based training and development programs, which have become increasingly popular in the past five years. Intended mainly for management and professional level workers in corporations, these team development programs utilize physical and mental challenges as metaphors for professional challenges in the corporate organization. They often include group problem solving and management events as part of the group development experience. The theory underlying these programs is that if a team atmosphere can be created in an experiential setting, then this atmosphere can perhaps be transferred back to the corporation, resulting in increased productivity, morale and a more positive work climate. Long (1984, 1987) and Petrini (1990) described these programs, listed the potential benefits in team building and group cohesion, listed specific programs (Petrini), and gave anecdotal evidence as to the impact these programs have had on participant groups. Oddou (1987) examined various wilderness training programs through a literature review and phone interviews with program managers. He found that the primary objectives of the programs were increasing self confidence and team building. Oddou also found that the evaluation of such programs is largely qualitative. In addition to these studies, there appears to be research being conducted within a number of these training and development programs seeking to document the impact the programs have on individuals and groups. Little of this research has yet been published in the research literature.

Special groups, particularly persons with physical or developmental disabilities, have been receiving increased attention in the outdoor education literature. Robb and Ewert (1987) reported on the positive benefits in group interaction with these groups in outdoor education programs. McAvoy and Schleien (1988) found increased social interaction and social acceptance as a result of participation in integrated outdoor education programs. McAvoy, Schatz, Stutz, Schleien, and Lais (1989) reported increased social interaction, tolerance of others, and peer acceptance as a result of participation in integrated wilderness programs. Their results differed from the study by Engstrom (1982), which found no significant difference between public school and outdoor education laboratory school settings regarding frequency of interactions or sociometric attitudes between sixth grade children with and without disabilities.

The group stages topic is a popular one in the outdoor/experiential/adventure education literature. Much of the literature has concentrated on adapting and applying the accepted group stage models from the group development literature to the particular context of outdoor education (Jensen, 1979). Little actual research has been reported on how these stages or the process of developing through them influences the group or the individuals in the group. Ewert and Heywood (1991) used the Jones (1973) model as a theoretical basis for their research of Outward Bound course participants and found that participants do pass through several stages developing mutual commitments and becoming effective functioning groups. Phipps (1986, 1991) used the Jones model in developing and testing the Group Dynamics Teaching Model and found a positive impact on group dynamics when leaders track and intervene to enhance those dynamics (Phipps &

McAvoy, 1988). (See further discussion of Phipps' model below in section on leadership and power.)

An expanded version of the Jones model of group development stages is presented in the model by Garland, Jones and Kolodny (1973). This five stage model has been adapted and applied to adventure education in a comprehensive article by Kerr and Gass (1987). Their paper is not a report of research but is an in-depth treatment and explanation of the model stages (pre-affiliation, power and control, intimacy, differentiation, and separation) and how these stages demand different responses from group leaders. Kerr and Gass applied the five stages represented by the model to the three central program approaches or scenarios of adventure education: skill development programs, social development programs, and therapeutic programs. They then described what the group would look and act like (group indicators) in each of the five stages and outlined the specific role the instructor should assume in each of the five stages within each of the three scenarios. Kerr and Gass concluded that if instructors understand what is happening in each of these stages and scenarios they will be better equipped to select activities and strategies appropriate for the group at that particular stage.

Group Functions and Tasks Dimension

As in some of the other dimension areas, little research or scholarly material was found on the influences that group functions or tasks have on group development and dynamics in outdoor education (Table 3). Ewert and Heywood (1991) found that there were significant differences between white-water and land-based participants in the group stage process behaviors of cohesion and interdependence. They reported that participants of white-water courses believed their groups were more cohesive, interdependent, and problem-solving oriented than participants on land-based programs. Ewert and Heywood speculated that this may have been due to the unique environmental settings of white-water activities, which forced participants to use teamwork, be in close proximity to one another, and deal with constantly changing conditions.

TABLE 3. Group Functions/Tasks Dimensions

Goals	Relationships
Tasks	Decision Making
Action Plans	Outcomes/Results
Problem Solving	

The topic area of outcomes and results addresses the influence that group functions and tasks can have on the success or failure of the group to accomplish tasks or goals. Kanki (1990) studied mountain climbing teams looking at the relationships between team size and structure, leadership styles, authority structure, and successful team performance as measured by the team accomplishing its goal, which was in this case, reaching the summit. The study was developed to evaluate the usefulness of the mountain climbing environment as a high risk space analog. The article includes a number of useful references on team and group issues from the space and military research literature. In spite of some control and small sample size problems (22 climb teams, 122 individuals), Kanki tentatively concluded that group size is a major predictor of group performance and group member satisfaction, with the smaller teams (2-4 members) being the most successful. Also, a level of pre-event familiarity between group members correlated with group success.

Leadership and Power Dimension

The leadership and power dimension is the topic area which has generated the most attention in the outdoor and experiential education literature (Table 4). Much of this writing has been an attempt by the professionals in the field to formulate and standardize effective, safe, ethical leadership approaches that would facilitate individual and group growth in outdoor programs. Our review is not intended to be a review of leadership research in outdoor programs, but rather a review of literature and research that has addressed how leadership influences group development and group dynamics in the context of outdoor programs. Table 4 lists the primary topic areas in the leadership and power dimension. Even though there is a relatively large amount of literature on leadership in outdoor programs, there is very little research that documents or explains the influence these leadership and power dimensions have on group development or dynamics.

TABLE 4. Leadership And Power Dimensions

Ethics
Multi-cultural Considerations
Leadership Emergence
Leader Effectiveness/Leadership Traits
Dependence/Counter Dependence/Interdependence
Managing Group Dynamics
Team Building
Leadership Models
Situational - from Hersey and Blanchard
Ethical - from Terry
Other Outdoor Leadership Models
• Knapp - Humane Climates Model
• Phipps - Group Dynamics Teaching Model
• Priest - Conditional Outdoor Leadership Theory
• Jordon - Comprehensive Interaction Expectation Model

Leader effectiveness and the desired traits of outdoor leaders have been primary areas of professional writing in outdoor education for a number of years. Readers seeking information on these dimensions can consult major texts by Cockrell (1991), Ford and Blanchard (1985), and Miles and Priest (1990). Most of the research in this topic area has centered on surveys of outdoor program managers and leaders to determine opinions on desired leadership traits.

Two major models of leadership have been drawing attention from outdoor education scholars recently. The **Situational Leadership Model** and the **Ethical Leadership Model** appear to offer some reasonable explanations as to how a leader and a group interact in the context of the tasks and the relationships that are a part of outdoor programs. The situational leadership approach (Hersey & Blanchard, 1984) hypothesizes that group goals lie on a continuum between enhancing human relationships and accomplishing group tasks. The leadership style that is most appropriate for a given situation depends on the maturity level of the group and the demands of that situation. Different leadership styles (telling, selling, participating, and delegating) result in different outcomes on the relationship/task continuum. This model appears to be attractive to some outdoor education professionals because of the changing situations which usually surround outdoor programs and because of the model's attention to relationships as well as tasks. Phipps (1986, 1991) has studied the relationship between the situational leadership model and group dynamics in a number of outdoor education and other contexts. He has connected the situational leadership model of Hersey and Blanchard with the group development model of Jones (1973) to present interesting research and practice approaches. His 1986 study used these two models as a theoretical basis to measure the effectiveness of a leader training approach intended to increase leadership adaptability and effectiveness, as well as to increase group dynamics. He found that a systematic approach, which included teaching the situational leadership model and a group dynamics model, resulted in a positive relationship between leader effectiveness and participants'

perceptions of group dynamics. Hardin (1979) also used the situational leadership model as the basis for her literature review and field observational study, assessing factors important in designing and leading outdoor experiences aimed at promoting lasting psychological gain for adult women.

Some outdoor education practitioners and scholars consider the situational leadership model as problematic. They believe the model is too dominated by task goals and does not provide an effective representation of the person centered goals and interactions that characterize modern outdoor programs. They also see the situational leadership model as being linear, compartmentalized, and too oriented to the corporate goals of accomplishing tasks and increasing productivity. These leaders want to focus more on the individual and group growth dimensions. The ethical leadership model described by Terry (1986) is the choice of many of these scholars to portray the ideal relationship between leaders and groups. Hunt has called for ethics in outdoor programs for a number of years (1986). However, Terry's ethical leadership model was developed for use in the context of corporations, politics, and other organizations and has only been recently applied to outdoor programs.

Ethical leadership is characterized by the leader employing social-ethical practices regarding participants. It focuses on caring, concern, attention, empowerment, and person centering. This model emphasizes the active nature of leadership which is practiced in concert with followers. The model is based on seven interrelated and interdependent ethical principals: authenticity, dwelling, freedom, justice, participation, love, and responsibility. To date there has been little research linking this model to group dynamics. However, a number of case study and qualitative reports of ethical leadership have been completed centering on Woodswomen, an adventure program serving primarily women (Dickie, 1990; Lehman, 1991; Mitten, 1989). This model appears to offer opportunities for future research.

Other leadership models are being developed in the outdoor education field and researchers are beginning to explore these models for effectiveness and for influence on group dynamics. Most of this research, however, is based on case studies or is descriptive in nature and often consists of opinion surveys of outdoor program leaders regarding the usefulness of the models in practice. **Knapp's Humane Climates Model** (1988) gives direction in building intentional communities within outdoor programs using self-knowledge, interpersonal skill enhancement, and environmental awareness values. **Phipps' Group Dynamics Teaching Model** (1991) was described above in the discussion of the situational leadership model. He has conducted research documenting the effectiveness of the model and has also developed an instrument to measure group climate in outdoor programs. Priest and colleagues have developed the **Conditional Outdoor Leadership Theory** (Priest & Chase, 1989; Priest & Dixon, 1991), which is based on the levels of concern for task and relationship and on the favorability of the conditions at the time. This model is currently being tested by using qualitative research methods in a number of outdoor programs. Jordan (1989) has proposed the **Comprehensive Interaction Expectation Model** as a combination of group based theory and situation based theory which focuses on the dynamics of leader role behaviors within the scope of the leader-group-situation interactions. Research on this theory has not yet appeared in the literature.

Recommendations for Future Research

Future research in the areas of group development and group dynamics in outdoor education should move away from simply using surveys of leaders or participants and toward the use of research designs and measurement techniques described in the group dynamics literature. Forsyth (1990) describes three major research designs which seem appropriate: in depth case studies of single groups; correlational analyses of relationships between various aspects of groups; and experimental designs requiring manipulation of various aspects of the group situation. Specific research and measurement methods that would be appropriate include self report measures, like sociometry and multi-item scales, to measure environment, attitude, and cohesiveness in the group (see article by Ewert and Heywood in 1991 for an example of a multi-item scale). Observational techniques are particularly powerful research methods that have not

been employed widely in the outdoor education field, but which are vital if we are going to better understand the true workings of a group in outdoor situations. Participant observation and structured observation techniques like the SYM-LOG system of multiple level observation in groups (Bales, 1980) seem to offer guidance in developing more in depth research to study groups in outdoor education.

Conclusion

An overall evaluation of the status of research on the topics of group dynamics and group development in outdoor education is that there is very little research available documenting the group dimensions of outdoor education experiences and programs. If researchers or graduate students are searching for an area of research where they could make a significant contribution, group dynamics and development would be a fertile area for scholarly inquiry. Very few of the dimensions and topics listed on Tables 1-4 have been addressed at all in a research context. Much of the research that has been completed has consisted of opinion surveys of outdoor leaders and program managers regarding the effectiveness of leadership models or opinion surveys of participants reporting on some aspect of group dynamics within programs. Appropriately designed and implemented research is needed to assist outdoor education scholars and practitioners in understanding group dynamics and group development.

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Summary of Group Development/ Group Dynamics Discussion

Leo McAvoy and Andy Young

The identification of specific research topics that need to be addressed in groups and outdoor education was discussed at the 1992 Coalition for Education in the Outdoors Research Symposium. At the Symposium, a working group of 15 outdoor education researchers participated in an abbreviated focus group exercise to identify priority research topics from the research dimensions and topics listed in Tables 1-4 in this paper. Seven primary topics were identified as needing research. They included, in priority order: leadership models, problem solving ability of groups, diversity within groups, multicultural considerations, gender, class, and relationships.

The first three topics (leadership models, problem solving, and diversity) were discussed and more specific research issues were identified for each. The focus group deemed that leadership models needed to be studied to determine the influence of specific models on group dynamics and development. For example, does a particular model apply, and is it effective in facilitating effective group development in multicultural situations and in regard to gender issues? Assessment protocols need to be established and validated that will assess leaders and groups regarding these issues. The focus group members viewed problem solving as an indicator of a well functioning group. The challenge for the researcher includes how one measures the problem solving growth and ability level of a group, what components of training are effective in improving problem solving abilities, how one incorporates the speed of problem solving and the quality of the solution into the measurement, and how group members feel during the problem solving process. The focus group members also saw a necessity for moving beyond the participant survey methodology and moving toward group observation techniques and sociometry techniques of research.

The diversity topic was viewed by the focus group members as an important overriding topic that needs to be addressed through research to enable this field to better serve a more diverse population and to move beyond differences to creating social structures of inclusiveness. This diversity topic included the issues of culture, gender, and class. The focus group members believed diversity has been a neglected area in outdoor education research and field practitioners are realizing more and more that there is not one correct way to manage groups.

Keynote Presentation

Therapeutic Uses Of Adventure-Challenge-Outdoor-Wilderness: Theory and Research

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One of the emerging theories of therapy that appeals to me as a psychologist has its roots in the work of Milton Erickson (1980) and is labeled "utilization." I believe the theory is very respectful of all persons whether they be patients or clients, normal or dysfunctional, acute or chronic, temporarily, or differently abled. The respect evolves from an attempt on the part of the helper to co-create a treatment plan with the person who comes to the therapeutic situation in order to facilitate solutions to real or imagined problems. Such an approach might utilize a person's past exposure with therapy to find out what did or did not work and utilize that information in mapping a way to health. The therapist might also plan a strategy that involves paradoxical directives or absurd tasks to utilize a client's resistance. Whatever the strategy, the therapist is open to assessing what the person brings to the environment where therapy takes place in order for a co-creation to be successful.

The goal of this presentation is to utilize my knowledge of diagnosed populations who participate in outdoor learning experiences as part of a therapy prescription and identify some adequately documented key work as well as recurrent and forthcoming findings.

In a quest to "walk my talk" or "practice what I preach," I have attempted to utilize expertise from past writers on outdoor learning experiences in order to co-create with them a list of what we know and what we need to know about my topic. I chose not to bore you with an evaluation of past research attempts that suffer from a lack of adequate control groups, follow-ups, sample sizes, or other threats to both internal and external validity. I believe writings by Bendoroff (1990), Burton, (1981), Ewert (1987, 1989), Levitt (1982), and Shore (1977) as well as others cover a substantial amount of information on research into outdoor pursuits that include references to therapeutic populations. The writings of Bacon (1983, 1987, 1988; Bacon & Kimball, 1989), Chase (1981), Gass, (1991), Kimball (1983, 1991), Haussman (1984), Roland, (Roland et al., 1987), Schoel, Prouty, & Radcliffe, 1988; Stich (1983; Stich & Gaylor, 1983), and Witman, (1989) have also contributed significantly to this field. These writings are highly recommended by those seeking such research evaluation. I have chosen to limit my review to the past decade including the reviews mentioned above and additional work drawn from recent (1980-1991) available abstracts, articles, and documents obtained from CD-ROM and DIALOG searches of ERIC, PsychLit, and Dissertation Abstracts International. I have also attempted to limit my search to empirical articles that specifically work with a population that would meet DSM-III-R (American Psychiatric Association, 1987) criteria or theoretical articles I judged to contribute to understanding or furthering the field of therapy in outdoor learning situations. I have also chosen to apply Kazdin's (1991) definition of psychotherapy to my reading of our field. He stated that: psychotherapy is ... an intervention to decrease distress, psychological symptoms, and maladaptive behavior or to improve adaptive and prosocial functioning. These ends are sought primarily through interpersonal sources of influence such as learning, persuasion, counseling, and discussion integrated into a specific treatment plan. The focus is on how clients feel (affect), think (cognition), and act (behavior) (p. 785).

As most of you know, comprehensive searching of this field is difficult and I apologize at this point for intentionally or unknowingly leaving out or including an article that you feel is worthy or unworthy. My aim is to be as inclusive as possible. This paper may be more global than you are wanting, but it is my goal to try to work within a realistic boundary. I also recognize that having realistic and clear boundaries is a goal many of us as therapists have with the clients and families with whom we practice. By defining my agenda, I hope to make a contribution to the field.

Research Critique

The thrust of my article is to apply research critiques from the field of psychotherapy onto my topic area. For this I will make use of recent review work by Gelso and Fassinger (1990); Goldfried, Greenberg, and Marmar (1990); and Kazdin (1991). I wish to use selected recommendations they have made for research on psychotherapy as a guide to evaluate and advocate improvements in our field.

First, there are a variety of forms of what can be labeled as "psychotherapy." Our field also suffers from definition problems as others (Roland et al., 1988) have noted. The novice and experienced reader is faced with various terms such as adventure therapy (e.g., Gass, 1991; Stich & Senior, 1984), adventure-based counseling (e.g., Maizell, 1988; Shoel, Prouty, & Radcliffe, 1988), experiential-challenge (e.g., Roland et al., 1987), outdoor-adventure pursuits (e.g., Ewert, 1989), therapeutic adventure programs (e.g., Wichmann, 1991), therapeutic camping (e.g., Rice, 1988; Walton, 1985), wilderness therapy (e.g., Bacon & Kimball, 1989; Berman & Anton, 1988; Levitt, 1982), and wilderness-adventure therapy (e.g., Bandoroff, 1990) to name the primary labels attached to what many of us do. Our field also uses different environments such as camps or wilderness settings and activities such as traditional residential camp activities, rock climbing, cross country skiing, and ropes courses. It is even difficult to limit this field to what takes place only in the out-of-doors, since many writers, myself included, (i.e., Gillis & Bonney, 1986, 1989) are bringing activities from outdoor settings into traditional psychotherapy settings. But we should not be held up in settling on one name or label.

Ewert (1987, 1989) notes a "theme" of therapeutic intervention "subsumed" in research on outdoor pursuits. He, along with others, cited global findings such as improved self concept, social attitudes, and behavior along with reduced emotional problems as evidence of (implied therapeutic) effectiveness. However, there still does not appear to be one clearly defined and researched method of conducting psychotherapy in outdoor learning experiences, in wilderness-adventure settings, or in using adventure-based activities that can be assessed for effectiveness. To correct this problem, we need specific treatment manuals, such as those required in training grants by the National Institute of Mental Health (NIMH) (Goldfried, Greenberg, & Marmar (1990), to provide protocols of psychotherapy in outdoor adventure settings. To gain respect in the research field and also provide practitioners with "how-to-guides," these protocols need to spell out exactly what is done in outdoor therapy. Such guides will allow for replication with similar or different populations and can be assessed quantitatively for effectiveness. In addition, qualitative evaluation can offer an understanding of how these programs work with homogeneous diagnostic populations while being compared with: (a) no-treatment control groups, (b) traditional methods of working with similar populations, (c) alternative methods of doing the same thing, and (d) different personality types/experience levels of leaders, including both formally and on-the-job trained. If such training manuals are developed, they need checks and balances to insure treatment integrity that might be provided through supervision or video-taped sessions (Kazdin, 1991). Such specificity, coupled with research, may be able to (a) revitalize the experiential tradition of psychotherapy, which according to Goldfried, Greenberg, and Marmar is "either in danger of becoming extinct, or ... (of) being absorbed by other approaches" (1990, p. 666), (b) gain more recognition and respect among traditional psychotherapy researchers and practitioners, and (c)

contribute significantly to the advancement and integration of our field with traditional psychotherapy. It is difficult, however, to envision how such extensive training manuals will be developed and evaluated across populations and therapists unless some of our larger organizations (e.g., Outward Bound and Project Adventure) fund such an in-house endeavor or some person or team of persons is federally or privately grant funded to be able to afford the time and energy necessary to carry out such an enormous project.

Secondly, our field, like that of psychotherapy, has used (a) diverse measures (e.g., self-report and behavioral measures), (b) various environments and activities (Rohnke, 1984, 1988, 1989, 1991), and (c) different levels of participant functioning such as fully and differently abled (e.g., Ewert, 1989; McAvoy, Schatz, Stutz, Schleien, & Lais, 1989; Robb & Ewert, 1987; Roland, 1982); inpatient (e.g., Berman & Anton, 1988; Stich & Senior, 1984; Voight, 1988) and outpatient (e.g., Berman & Davis-Berman 1989) assessed at different times (pretest posttest, and follow-up) for different lengths of treatment (e.g., Bendoroff, 1990; Burton, 1981; Ewert, 1987; Levitt, 1982; Shore, 1977). As Kazdin (1991) noted, the use of different and multiple measures, at different times, for different definitions results in alternative outcome criteria to decide what indeed does work.

Randomized clinical trials comparing treatment and control groups or alternative treatments on outcome measures have dominated the psychotherapy research. Such research has continued to be controversial due to "no-difference" findings. This lack of difference may be related to poor statistical power due to small sample sizes and "weak" assessment instruments (Kazdin, 1991). This low power may account for how laboratory findings among volunteer (solicited) clients at major research universities differ from clinical field-based "impressions" of practitioners using "alternative" treatments who deal with clients who often solicit (are referred or mandated to) them (Goldfried, Greenberg, & Marmar, 1990). For traditional psychotherapy, the use of regression techniques for targeting treatment-relevant client attributes instead of analysis of variance research designs is suggested to move beyond the "no-differences" findings. More field based research is also called for to make laboratory findings more practically relevant.

Due to cost, time consumption, comparable outcomes of various treatments, and internal and external validity issues, such outcome research is slowly giving way to the study of process as it relates to outcome in psychotherapy. Even global meta-analysis has fallen by the way in psychotherapy research and is being reserved only for specific populations or treatment approaches. A focus on significant change events in psychotherapy and a data base for collecting results of therapy (as Ewert, 1987, 1989 suggested) across different therapists is currently seen as a more fruitful avenue for researchers to contribute to practitioners (Goldfried, Greenberg, & Marmar, 1990).

Another evaluation criteria we should consider is offered by Jacobson and Truax (1991). They coined the term "clinical significance" to describe the ability of an approach or model to impact an individual's level of functioning following treatment so that they would (a) fall outside of the range of dysfunction, (b) fall within the range of the normal population, and (c) be closer to the mean of the normal population than the dysfunctional one.

Research specifically on therapeutic populations in adventure-challenge-outdoor-wilderness programming is subject to many of the same criticisms documented for other populations. These are the general lack of randomization, the use of non-equivalent control groups and "in-house" evaluations, and the lack of adequate follow-ups, resulting in generally positive but contradictory findings such as changes in self-report measures but no-differences in behavioral measures (Bendoroff, 1990; Burton, 1981; Ewert, 1987, 1989). It would, however, be difficult to criticize our research for lack of a field base since it appears nearly all of it is conducted within the natural (outdoor) environment. We, like our fellow sojourners in traditional group approaches to counseling (e.g., Gelso & Fassinger, 1990) could be criticized for a narrow focus on outcome

measures and research designs that utilize t-test and ANOVA evaluations instead of regression models for predictors of success (Goldfried, Greenberg, & Marmar, 1990). Such models are beginning to emerge in recent dissertation work, (cf. Rice, 1988; Wichmann, 1990) where relationships between predictors variables and dependent variables has yet to be firmly established (cf. Gibson, 1981).

Our field could benefit from both a global and specific meta-analysis of existing research on diagnosed populations instead of the numerous annotated bibliographies mentioned by Ewert (1987, 1989). Such an analysis might add credibility to our field especially if augmented by Jacobson and Truax's (1991) clinical significance criteria. We could also benefit from using randomized treatment versus placebo controlled studies to identify how an approach works instead of whether it is effective as noted by Parloff (cited in Goldfried, Greenberg, & Marmar, 1990).

Thirdly, and most related to the goal of this paper, Kazdin believes the real question for psychotherapy research is best summed by a quote from Paul (cited in Kazdin, 1991) who asks "What treatment, by whom, is most effective for this individual (group/family in many of our cases) with that specific problem, under which set of circumstances?" (p. 786) The what question is difficult to answer due to the definition problem mentioned above. With respect to Bacon (1983, 1987, 1988, Bacon & Kimball, 1989), Gass (1991), Project Adventure (Shoel, Prouty, & Radcliffe, 1988), Roland (Roland et al., 1987) and Wichmann (1991), there still does not appear to be a clearly stated and consistently tested method of how to conduct psychotherapy in our field. Perhaps the models just mentioned might fit well into Bacon's (1987) division of three different adventure programming models: (a) "mountain speak for themselves", (b) "Outward Bound Plus", and (c) "metaphoric." But, as mentioned earlier, comparisons among well documented models need to be tested. One wonders, however, even if treatment integrity is insured, if such comparisons will only reveal the same "no-difference" results found in psychotherapy research (Gillis, 1986; Goldfried, Greenberg, & Marmar, 1990; Kazdin, 1991). Our focus should be on how they work and with whom.

The "by whom" question is also difficult since training manuals do not exist nor has any research been found that assesses therapist competency in our field by comparing experienced versus novice therapist or formally trained versus on-the-job/naturally trained therapist. My hypothesis, based on the experience of training traditional counselors and adventure-based counselors, is that our field would find, as does psychotherapy, that "some therapists are better than others - regardless of training" (Goldfried, Greenberg, & Marmar, 1990, p. 663). We need to test this hypothesis ourselves instead of just debating the needs and merits of traditional psychotherapy training as a prerequisite for doing psychotherapy outdoors.

The effectiveness for different individuals, groups, and even families with specific diagnosis, under different circumstances and environments, is probably the most interesting and most difficult question to many of us. As seen in Table 1, there have been numerous studies with different diagnostic populations since 1980 (although the preponderance of delinquent studies remains). We must note the addition of programs with couples and families in this table as well as diagnostic specific groups such as victims of rape and incest. The lack of repeated studies on similar populations, however, is also obvious from viewing the table.

Further reading will reveal that measurement continues to be focused on global outcome changes without looking specifically at the process of such change or the context in which the change occurred. As Ewert (1990) noted in "revisiting" self esteem in outdoor settings, rock climbers' feelings of self esteem related to climbing skills did not transfer to more global feelings of valuing themselves. He felt the findings were mediated by feelings of competence in self. However, the question remains whether global changes in self esteem or other commonly measured outcome attitudes in our field translate to a specific therapeutic context of persons in

various diagnostic categories, who may also be different (e.g., in gender, race, class, or national origin) than has been the norm for our field.

Table 1

Studies Done with Different Diagnostic Populations Since 1980

Author	Date	Diagnosis	Population
Banaka & Young	1985	Chronic Psychiatric Inpatient	Adult
Bandoroff	1992	Delinquent	Adolescents & their Families
Boudette	1989	Delinquent	Adolescent
Berman & Anton	1988	Inpatient Psychiatric	Adolescent
Callahan	1989	Delinquent	Adolescent
Clagett	1989	Delinquent & emotionally disturbed	Adolescent
Clapp & Rudolph	1990	Outpatient	Families
Creal & Florio	1986	Inpatient	Adolescents & their Families
Davis-Berman & Berman	1989	Outpatient acting out	Adolescent
Deal	1983	Alcoholics	Couples
Duhaime	1982	Learning-Disabled	Adolescent
Freed	1991	Emotionally-impaired	Adolescent
Freeman, et al.	1982	Behavioral problems	Children
Gass & McPhee	1990	Substance Abusers	Adolescent & Adult

Table I (continued)

Studies Done with Different Diagnostic Populations Since 1980

Author	Date	Diagnosis	Population
Gaus	1981	Delinquent	Adolescent
Gerstein & Rudolph	1989	Non-distressed	Families
Gibson	1981	Delinquent	Adolescent
Gillis	1986	Non-distressed	Couples
Goodwin & Talwar	1989	Incest victims	Adult
Kirpatrick	1983	Alcoholics	Couples
Gugino	1987	Delinquent	Adolescent
Kjol & Weber	1990	Sex offenders	Adolescent
Kuhn	1982	Behavior disorders	Adolescent
Maizell	1988	Delinquent	Adolescent
Mason	1980	Non-distressed	Couples
McAvoy et al	1989	Fully & Differently Abled	Adult
McClung	1984	Inpatient psychiatric	Adult
Minor	1988	Delinquent	Adolescent
Nunley	1983	Delinquent	Adolescent
Nurenberg	1985	Borderline	Adolescent
Pfirman	1988	Rape Victims	Adult
Rice	1988	Delinquent	Adolescent
Sakofs	1991	Delinquent	Adolescent

Table 1 (continued)

Studies Done with Different Diagnostic Populations Since 1980

Author	Date	Diagnosis	Population
Roland & Hoyt	1984	Physically disabled	Adolescents & their families
Schwartz	1983	Emotionally disturbed	Children
Stich & Sussman	1981	Inpatient psychiatric	Adult
Walton	1985	Inpatient	Adolescent
Weeks	1985	Delinquent	Adolescent
West	1989	Emotionally disturbed	Children
Wichmann	1990	At-risk	Adolescent
Witman	1989	Inpatient psychiatric	Adolescent
Wright	1982	Delinquent	Adolescent
Ziven	1988	Inpatient psychiatric	Adolescent
Zwart	1988	Delinquent	Adolescent

More extensive and focused review studies are needed at the depth of Bendoroff's (1990) review of 42 studies on conduct disordered/delinquent populations. I would like to briefly touch on Bendoroff's major findings as an example of what can and needs to be done in our field. First, consistent support was found for:

1. Changing self perception of participants to become more realistic.
2. Changing social attitudes towards others to become more positive and increasing participant's sense of belonging.
3. Lowering recidivism rates despite definition problems among researchers as to just what constitutes recidivism.

Secondly, Bendoroff noted inconsistent findings among variables such as locus of control, problem solving, behavior change and durability of change. His review ended with many of the same recommendations made in this presentation including the need to know what is causing the therapeutic effects: program elements or instructor variables. I agree with Bendoroff that process

evaluation of the delinquent/conduct disordered diagnostic category is sorely needed in this field. Hopefully more researchers will build on Bandoroff's analysis and recommendations for this population and expand their work into specific adult diagnostic groups as well as populations such as couples, families, and the elderly.

Recommendations

My attempt at contributing has been to overlay criticism and forecasting in the field of psychotherapy onto our field. The results have been that although we may fall behind in sheer numbers of studies, many of the trends in psychotherapy research offer helpful suggestions to guide further research. My recommendations include the following:

1. Someone needs to conduct a meta-analysis on therapeutic aspect of adventure-challenge-outdoor-wilderness that includes the criteria of clinical significance along with traditional measures of effect size.
2. Instead of spending time agreeing on a particular term or phrase to describe what we do, let's put energy in writing specific how-to training manuals that can be shared, and tested using quantitative and qualitatively methods with research designs focused on multiple measures and predictor models. The models need to be tested across numerous homogeneous diagnostic populations and in multicultural settings to better understand their strengths (when indicated) and limitations (when contraindicated).
3. As one or more models emerge that show some research promise, training issues can be addressed to better understand how to teach traditionally trained psychotherapist to do whatever it is we do as well as how to ethically train experientially based outdoor leaders and paraprofessionals.
4. Our writing needs to be more easily available to one another through an agreement to share resources and reference one another. Perhaps a common accessible database of theoretical information will allow dissertations to move beyond traditional pre-post, treatment-control, outcome designs and offer more information on how and with whom, what(ever) we do, works.
5. Finally we need to focus on sharing what we do with traditional therapists in traditional psychotherapy journals and at the traditional therapists' regional and national conferences. Such sharing may lead to our theory, practice, and findings being cited more often (cf. in traditional reviews of drug prevention (e.g., Tobler, 1986) and the treatment of juvenile offenders (e.g., Basta & Davidson, 1988)).

Summary

Following the presentation of ideas from this paper, a discussion ensued over my recommendation that someone write down exactly how they conduct adventure therapy in order for others to replicate that method. The term "cookbook" was brought into the discussion to describe what some in the audience apparently perceived as being told the way to do adventure therapy as opposed to a way of conducting adventure therapy that could then be replicated in different parts of the country with different populations in order to test the efficacy of a model.

Building on the cookbook metaphor, some in the audience noted that a cook will closely follow a recipe until accomplished and then will deviate and experiment with ingredients to fit particular preferences and taste. Others wanted to know just what level of detail would be included in an adventure therapy "cookbook" and how one model could be appropriate to the nuances of different populations under different situations with different dynamics. A suggestion made from the audience that I feel was very practical in helping the replication issue asked that writers in our

field, often limited by journal editors to briefly describing their particular procedure, offer to provide the reader with a more detailed description of exactly what activities were done with the population as well as the type and nature of the group discussion that accompanied the activities or experiences.

Integrity, credibility, and reliability are the cornerstones for an effective therapeutic adventure program. It is my hope that this paper and the ensuing discussion will be "food for thought" (pun intended!) for more fruitful research and practice of adventure therapy.

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Therapeutic Uses of Outdoor Education Discussion

Michael A. Gass

The discussion of the therapeutic aspects of adventure programs centered around a variety of issues. The areas of the discussion were organized into six categories:

1. **Examining Treatment Effectiveness.** A large degree of concern was demonstrated pertaining to "what treatment, by whom, is most effective for this client with that specific problem under which set of circumstances." Each of these variables in interaction with each other needs further examination for the validation as well as the development of therapeutic adventure programs. Some of the questions associated with these analyses could include: Are there differences in the effectiveness between inpatient short-term programs and extended wilderness trips? Are there differences in the effectiveness of certain treatment approaches in adventure therapy? For example, is there a difference in the way adventure therapists process and experience? Knowing that many of the concepts of adventure therapy are based on the idea that activities are "unfamiliar" to clients, what is the appropriate level of "activity sequencing" to use with certain populations? What type of research designs would be most appropriate for studying specific types of issues?
2. **Issues of Training and Competence of Professionals in Adventure Therapy.** In this rapidly evolving field, questions have arisen concerning who is qualified to conduct therapeutic adventure experiences and how (or even should) professional competencies are (be) regulated. Some of the questions associated with the training of professionals included: Who is the professional that is most appropriate to lead the processing/facilitating portion of the experience when working with a social service agency? There are many service providers currently conducting training in adventure therapy practices. Is it appropriate/ethical to do "therapy" in these types of experiences? What guidelines should be followed? How do we test different training models to prove program effectiveness? How do we accommodate for different therapist styles in adventure programming? How long does it take to train an adventure/challenge therapist?
3. **Integration of Adventure Therapy with other Therapeutic Approaches.** Many of the current models of therapists using adventure experience for therapy have been "hybrid" in nature. As these models are used, a number of questions have arisen: What are the potential benefits as well as the concerns of these models? How do we impact traditional therapists that work with adventure therapists in a positive manner? How do therapeutic adventure programs interact best with insurance companies to acquire/maintain 3rd part payments?
4. **Treatment Issues.** Certain issues concerning treatment have become apparent in conducting therapeutic adventure experiences. Some of these are that need further research include: What influence do medication have on the adventure process for clients? Further investigation is also needed on the influence that adventure programming has on clients receiving medication. How does the adventure process vary for clients with particular diagnoses? What are certain contraindications for therapeutic adventure experiences.
5. **Clearer Definitions of Programs.** A concern exists among participants that we need to be able to differentiate between the types of programs delivering adventure therapy services. These programs might be classified by length of time of the treatment, the goals, the level of intensity of treatment, and the level of training of the professional.
6. **Funding.** One of the concluding concerns was the idea of funding such research projects. Where such monies should be obtained, how quality assurance would be insured, potential impact on various academic departments as well as federal agencies, how support could be acquired from corporations and other funding agencies all were mentioned as concerns.

Outcomes of Adventure Program Participation by Adolescents Involved in Psychiatric Treatment

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Abstract: This study investigated selected outcomes of adventure program participation by adolescents involved with psychiatric treatment. This study was one component of a larger study of adventure outcomes among adolescents in treatment. A random ($N=42$) sample of program participants at 12 sites (hospitals, treatment centers) were involved. The participants were asked a week after their involvement in adventure experiences, to indicate the extent to which they had shared information about the adventure experience with others and had applied attitudes and skills gained in the program. The findings suggested that adolescents in treatment talk about the adventure experience and apply it in other areas of their lives including group therapy, school and family meetings. The study provided a grounded perspective for further inquiry regarding the "transfer" of skills and attitudes from an adventure experience.

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The purpose of this study was to determine the impact of adventure program participation upon adolescents in treatment during the week following their participation. Specifically participants' communication about and application of the program experience were determined. The hypothesis of the study was that patients transfer or generalize aspects of the adventure experience to other life situations. Such transfer has been cited as critical to establishing the efficacy of adventure programming (Gass, 1985; Robb & Ewert, 1987; Schoel, Prouty, & Radcliffe, 1988) but has not been effectively documented (Ziven, 1988). Evidence of specific positive outcomes may be necessary to insure a role for adventure programming in a health care system that is increasingly governed by "managed care" decisions (Richmond, 1991).

Method

This study was one component of a larger study of adventure outcomes among adolescents in treatment (Witman, 1989). A random sample ($N = 42$) of program participants at twelve residential sites (hospitals, treatment centers) were involved. These participants were asked, a week following the conclusion of their adventure experiences, to indicate the extent to which they had shared information about the experience with others and had applied attitudes and skills gained in the program. These questions were asked by program leaders in individual interviews with participants.

Descriptive analysis of the responses was accomplished as well as determination of any effects of gender, age and diagnoses. The .05 level of significance was utilized in reporting these Chi Square comparisons. Characteristics of participants ($N = 42$) included: (a) an equal number ($n = 21$) of males and females; (b) varied age groups including ages 15-16 ($n = 21$), ages 17-19 ($n = 15$), and ages 12-14 ($n = 6$); and (c) diagnoses including substance abuse ($n = 16$) and other than substance abuse ($n = 26$). All of the adventure program sites utilized in the study approximated the Experiential Challenge Program (E.C.P.) model of adventure programming (Roland, Summers, Friedman, Barton & McCarthy, 1987). Goal setting, awareness, cooperative and trust activities, and group and

individual problem-solving were included in all programs. Participants' total hours of program participation ranged from 8-22 hours. All programs had co-leaders.

Results

Participants reported communicating about the adventure experience with peers (71.4%), family (57.1%), staff (28.6%), and others (11.9%). Only 7.1% did not communicate with anyone. Table 1 details each of the categories. Most frequently cited among peers were "other patients," among family was "mother," among staff was "psychologist/psychiatrist," and among others were "adult friends."

Table 1

Number of Participants Citing Communication with Particular Groups or Individuals (N = 42)

	n
PEERS	
Other patients	12
Friends	8
A friend	5
Other program participants	4
STAFF	
Psychologist/psychiatrist	7
Psychiatric aides/assistants	3
Social worker/case worker, nurse, teacher, staff member	2
Individual counselor, occupational therapist	1
FAMILY	
Mother	11
Parents	9
Sister	6
Whole family	3
Uncle	2
Grandmother, siblings, brother, step-father, other relatives	1
OTHERS	
Adult friends	2
A.A. attendees, pastor, instructor at other facility	1

The relationship of age to the communication with peers category was significant (Chi Square = 5.97, $p < .05$). While older (15-16 and 17-19 age groups) participants cited communication with peers at percentages of 71.4% and 86.7%, respectively, only 33.3% of younger (12-14 age group) participants cited this category.

All but one of the participants reported applications of the adventure experience in other life situations. The contexts of these applications included other treatment (66.7%), interaction with peers (47.6%), self-awareness (23.8%), and with family (16.7%). (Note:

"Self-awareness" was utilized to categorize those applications which participants cited as applying to all life situations or across settings. Examples include "can trust others" and "more independent/not clinging to others.") Table 2 provides examples of specific applications in each of these contexts. Applications in other treatment were most common and included changed behavior and attitudes in group therapy, individual therapy, community meetings, school and activity groups.

Table 2
Examples of Applications of the Adventure Program Experience in Various Contexts

Context	Setting/Application Examples
OTHER TREATMENT	Group Therapy - talked more openly and freely and more confident in ability to give feedback - trusted others in first session of new group Individual Therapy - more open and honest Community Meeting - ask questions, take a risk, get needs met - asked peers to respect her right to be listened to School - working harder at assignments - plan things more step-by-step Activity Groups - worked with others as a team - assumed activity leadership - reduced name-calling Treatment Generally - overcame fear of program - accept limits without argument
WITH PEERS	In Daily Living - supportive when others were having a hard time - talk with people more - do my share of chores - resisted peer pressure
SELF AWARENESS	All Settings - can communicate and solve problems better - feel more confident - belief that you can work together even with people you don't like
WITH FAMILIES	Visits and Meetings - open and honest with parents about drug history - trusted parents to assist with discharge plan - used problem-solving process from adventure in a family meeting

Some findings which compared applications by diagnoses, gender, and age were significant. Participants whose diagnoses included substance abuse more often cited applications "in other treatment" than did participants with diagnoses other than substance abuse (Chi Square = 3.65, $p < .05$). Percentages were 87.5% and 53.8%, respectively. While none of the male participants cited applications "with family," 33.3% of the female participants cited such applications (Chi Square = 6.17, $p < .01$). Finally, 73.3% of older (17-19 age group) participants cited applications with peers while only 33.3% of both 12-14 and 15-16 year-olds cited such applications (Chi Square = 6.19, $p < .04$).

Discussion

Findings specific to communication with others regarding the adventure program experience and application of the experience indicated a high and varied level of both. The hypothesis that aspects of the adventure experience transfer or generalize to other life situations was clearly supported. These situations included other treatment and suggest that adventure program participation both complements and supplements treatment. In several instances the adventure experience was reported to have a catalyst effect toward heightened or more positive involvement with peers, treatment staff and families. Roose's (1987) finding that investment in treatment has a high positive correlation with good treatment outcomes underscores the value of these positive findings on the treatment process.

Beyond treatment, the "parenting" (Durkin & Durkin, 1975) aspect of residential care seems to be positively affected by adventure programming. Participants cited, for example, better relations with roommates, a more cooperative approach to chores and an enhanced ability to accept limits and boundaries.

Findings of the study are limited to participants' discussion and application of the adventure experience in the week following their participation. Questions regarding latent effects and deterioration of effects are not addressed. Longitudinal studies regarding continued application of the program experience are needed. Ewert (1987) observed that research in adventure programming needs to move beyond what happens as a result of programs to determining how and why it occurred. Research linking program process and content to the specific applications discovered in this study would be consistent with this challenge. Also of value would be validation of these applications by others (e.g., therapists, family members) and at additional program settings.

Participants' discussion and application of the adventure experience in their family systems suggests that integration of the family into adventure programming may be warranted. Gillis and Simpson (1991) reported success with involving families in a component of an adventure based residential drug treatment program for youth. Adolescents bring to their work in groups a frame-of-reference shaped by the experience of their family system (Shapiro, Zinner, Berkowitz, & Shapiro, 1986). Adventure programs, which typically raise issues related to trust, fear, dependence/independence, problem-solving and intimacy, might provide an ideal forum for reversing this pattern. Concepts and attitudes developed in family group work in adventure programming might provide a revised frame-of-reference for the interaction of the family system.

Differences in age in the expressed perceptions of applications by participants in the study may be important to adventure program practice. Younger participants were found to have a different pattern of communication and application than did older (age 15 and above) participants. They were less likely to discuss the experience with peers or to apply it in peer-related situations. Whether these findings simply reflect developmental realities or are attributable to dominance of the process of groups by older members they suggest the need

for greater differentiation of programming by age. Formation of a pre-adolescent group would be one approach. More feasible, perhaps, would be consideration of age in any sub-grouping done during the adventure program.

Communication and application of the adventure experience was reported by most participants in the week following involvement. A vital question, however, is "how much longer did this communication and application last?" Participation in aftercare or outpatient programs of support (e.g., Narcotics Anonymous) or group therapy or individual therapy have all been linked to successful outcomes for adolescents following inpatient treatment (Gossett, Barnhart, Lewis & Phillips, 1977). Adventure programs should be added to the range of adolescent aftercare particularly for those individuals who have demonstrated an affinity for and development from them. Marx (1988) reported a model for such programs. One program leader in this study runs a distinct outpatient adventure program. Ex-patients return for services with a focus on their serving in leadership roles with the inpatient adventure program. More feasible, perhaps, would be an approach of matching and beginning the affiliation process of "graduating" adventure program participants with adventure-based activity or counseling programs in the community. While such programs are unevenly distributed across the United States their number and range of services appears to be growing. The more readily available generic (e.g., Outward Bound, YM/WCA's) adventure experiences provide another option.

Bettelheim (1985) stated that residential treatment is vital for many troubled youth and invaluable to therapists/caregivers not for the opportunity it provides for psychoanalysis or psychiatric treatment but for the opportunity it presents "to be there" when critical incidents occur. Relating this idea to Ann Sullivan's work with Helen Keller he stated "the learning could take place only because at that propitious moment when the water spouted on Helen's little hand, Sullivan was there to take advantage of this unique moment" (Bettelheim, 1985, p. 59).

Adventure programming, as this study suggested, is perceived by many participants as a unique "there" in the milieu of adolescent treatment. It is an experience that is based on a sequence of action and reflection and appears relevant to subsequent change in attitudes, affect, and behavior.

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Optimal Experience among Campers in a Resident Camp Setting

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Abstract: The purpose of this exploratory study was to assess optimal experience, also known as "flow" and "quality of experience," in a resident camp setting. Campers from a private coeducational children's camp in the southeastern United States were asked to record descriptions of their involvement, attitudes, and feelings during randomly selected times during two camp sessions in 1991. The research questions addressed were: How do experiences associated with a quality of experience and flow occur in the resident camp setting? How frequently do they occur? What implications does an understanding of flow have for providing better camp experiences? Based on this exploratory study which consisted of data from 910 experiences from 47 campers, several conclusions were drawn.

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Organized camping experiences have long been valued for the physical, emotional, social, educational, recreational, and spiritual outcomes. While difficult to document, a number of researchers recently have examined the benefits and outcomes of camp experiences and have determined their value (e.g., Chenery, 1991; Cowin, 1989; Stone, 1986). In addition to the character development dimensions of camp, it is also useful to examine the aspects of enjoyment that may have a significant effect on how a camp experience is perceived. The significance of enjoyment is not trivial and may, in fact, be vital to the survival of society (Csikszentmihalyi, 1981). The dimensions of enjoyment and the contribution that optimal experience can make to human development cannot be overlooked (Wells, 1988). When one stops to analyze what really happens in a camp experience, it may be that challenge, skills, and enjoyment are really the basis for most aspects of camp activities.

The purpose of this exploratory study was to assess optimal experience, also known as "flow" and "quality of experience," in a resident camp setting. Campers from a private coeducational children's camp in the southeastern United States were asked to record descriptions of their involvement, attitudes, and feelings during randomly selected times during two camp sessions in 1991. The overriding research questions addressed were: How do experiences associated with a quality of experience and flow occur in the resident camp setting? How frequently do they occur? What implications does an understanding of flow have for providing better camp experiences?

Review of the Literature

The basis of optimal experience has two dimensions: flow theory and psychological states. The framework for this study was flow theory, the description of those times in work and leisure when people report feelings of enjoyment, concentration, and deep involvement (Csikszentmihalyi, 1990). Flow theory predicts that an experience will be most positive when a person perceives that the environment contains high enough

opportunities for action (or challenges) which are matched with the person's own capacities to act (or skills). Flow relates to the theoretical model based on a ratio of the quantity of a subjectively experienced challenge to the quantity of subjectively felt skills. When the two are in balance and of a high enough quantity, flow is experienced. When both challenges and skills are high, the person is not only enjoying the moment, but is also stretching his or her capabilities with the likelihood of learning new skills and increasing self-esteem and personal complexity (Csikszentmihalyi & LeFevre, 1989).

The second way that the quality of experience was measured was through more traditional psychological variables such as happiness, creativity, strength, satisfaction, and motivation. These factors were classified as affect or hedonic valence factors and potency or arousal factors. The two dimensions of flow and quality of experience must be examined together to give a fuller picture of the camp experience for children.

Flow may be found in climbing mountains or in the "invisible mountains" around us (Mitchell, 1988, p. 59). The universal precondition of flow is that a person should perceive that there is something to do and that s/he is capable of doing it (Csikszentmihalyi, 1988a). According to Csikszentmihalyi & Csikszentmihalyi (1988a), in everyday life the opportunities for action are seldom evenly matched with our abilities to act. Opportunities for intense concentration seldom occur in daily life which is a fault of the "human condition." Flow helps to explain why people enjoy their work and their leisure and it also helps explain why, in some circumstances, people are bored and frustrated (Csikszentmihalyi, 1988a).

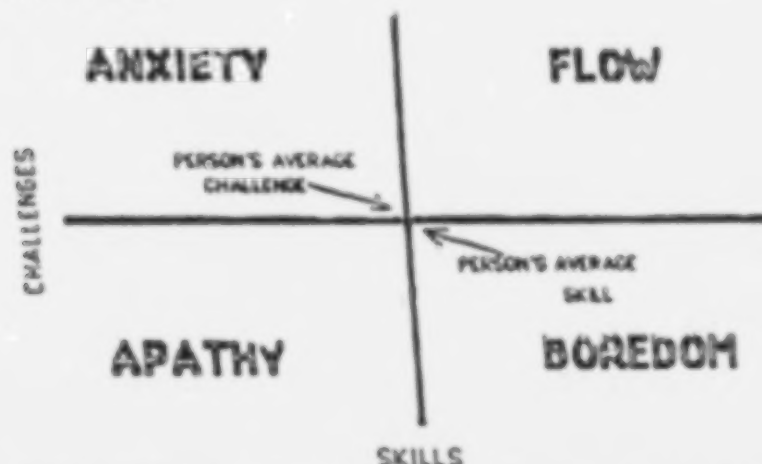
The dimensions of flow relate to challenge and skills. High quantities of skills coupled with high challenge results in a flow experience provided that other dimensions of the quality of experience are also present. Too much challenge without appropriate skills will result in anxiety. While a certain amount of anxiety may be good for individuals, too much can be detrimental. Too little challenge with high amounts of ability will result in boredom, especially if too little activity is associated with the experience. An activity or event that results in both low challenge and low skill use results in apathy. The use of a four dimension model has been most useful in describing the aspects of flow and nonflow as found in anxiety, boredom, and apathy (Csikszentmihalyi & Csikszentmihalyi 1988b, p. 261).

The study of "flow" has been developing for over 15 years. The questions concerning flow evolved from questions about intrinsic motivation and Maslow's "peak experiences." Early studies used subjective interviews and time diaries. The term autotelic experiences was initially used which indicated that experiences were rewarding in and of themselves. The Experience Sampling Method (ESM), also known as "beeper" studies, was developed to provide a randomization of sampling whereby individuals completed an Experience Sampling Form (ESF). Early data analysis suggested that "flow" occurred when challenges and skills were equal (Csikszentmihalyi, 1974). More recent studies have suggested that challenge and ability need to be above a certain level for flow to occur. While an 8-point model has been developed (Massimini & Carli, 1988) to illustrate the dimensions of flow, the four-point model shown in Figure 1 seems to offer a less complicated portrayal of the phenomena.

A number of research projects have examined flow over the past years. People in different ethnic cultures (e.g., Carli, Fave, & Massimini, 1988; Han, 1988; Sato, 1988) as well as people in work and leisure have been examined (e.g., Csikszentmihalyi & LeFevre, 1989; Fave & Massimini, 1988; Larson, 1988; LeFevre, 1988; Macbeth, 1988). In addition, optimal experience and flow have been measured in relation to other aspects of

everyday life (Massimini & Carli, 1988; Rathunde, 1988; Wells, 1988). According to Csikszentmihalyi (1988b) several conclusions can be offered as a result of years of applying this concept: (a) flow is a state of positive psychic functioning that can occur in all people; (b) flow is generally an optimal state; (c) large individual differences exist in the quantity and intensity of flow experienced in different people; and (d) flow is important in the dynamics of cultural evolution because people will seek to replicate it or to find it in the activities/events of their lives.

Figure 1. The Flow Model.



Flow data collected on adolescents has provided some interesting insights into their lives. Larson (1988) suggested that adolescents experience higher highs and lower lows during their daily lives and their emotions appear to shift more quickly than those of adults. Flow allows young people to experience "natural highs." In addition, the research has suggested that flow occurs in all ages and in both work and leisure activities (Csikszentmihalyi & LeFevre, 1989).

Methods and Setting

The procedures used in this study were a modification of the experience sampling technique (Csikszentmihalyi & Larson, 1987). The data were obtained by asking campers to complete experience sampling forms (ESF) at random times during the waking hours of a "normal" camp session. The times for the random samples were signaled by a camp bell. Five signals were given each day with approximately every other day sampled to lessen the disruption of the camp schedule. When campers heard the signal, they were asked to complete the ESF at their earliest convenience. A total of 910 experiences were sampled from 47 male and female campers aged 11-12 years.

Since this study was exploratory, only one camp was used. The camp, located in the mountains of the southeastern part of the United States, is a private independent camp that has been in existence since 1935. It served 200 campers ranging in age from 5-12 in each two-week session. A total of 100 staff are employed each session. The activities offered at the camp include water activities (canoeing, tubing, swimming, rafting), horseback riding, active games, creative arts (crafts, drama, pottery), community service projects, farm activities (animals, gardening, and milling) and outdoor activities (campcraft, ecology, rock climbing, challenge courses.). The campers lived in cabins of eight children and two staff. Campers chose a portion of their activities through participation in a daily sign-up, and were assigned a daily activity to ensure exposure to different program areas.

The sample consisted of 88% female and 12% males. While approximately the same number of each gender began the study, females seemed more likely to remain with the study during its duration. Over 70% of the responses were recorded in the first session in early July 1991. Over 50% of the responses were received during the first three days of the camp session with 25% during the middle of camp and 25% during the last three days of camp. About 43% of the responses occurred during or before lunch and 43% in the afternoon. During the evening, 13% of the responses from the total day were received.

The ESF took about two minutes to complete. It included such items as what kind of activity was engaged in at the moment of the signal, with whom, rationale for the activity, challenge and skills needed (to construct the idea of flow) and the psychological quality of the experience.

Current activity was determined by asking the camper what she/he was doing at the time of the bell. Each response was coded into 54 categories which were eventually grouped into 12 major categories. The campers were also asked to indicate if they were involved in other activities and with whom they were involved. Further, they were asked to indicate the rationale for the activity which included whether they had to do it, they wanted to do it, or they had nothing else to do.

The respondents were asked to indicate the challenge of the activity and the amount of skills on a four-point scale ranging from very high to very low. To minimize individual response bias, each camper's responses were transformed into individual *z* scores. The *z* scores were then used to determine in which of the four categories each of the activities was based on flow theory. The four categories were:

1. Flow context: Both challenge and skills are greater than the camper's average.
2. Anxiety context: Challenges are greater than the camper's average, and skills are less than her or his average.
3. Boredom context: Challenges are less than the camper's average, and skills are greater than her or his average.
4. Apathy context: Both challenges and skills are below the respondent's average.

Quality of experience was measured by 10 additional items on the ESF that asked about the camper's psychological states. These six scales were measured as affect which included items related to happiness, friendliness, and sociability; potency which included items related to alertness, excitement, and activeness; and one item each on motivation, creativity, relaxation, and freedom. All of these dimensions were used to measure the psychological quality of experience.

Results

Because the camp experiences were randomly sampled throughout the day, the percentage of time spent in each activity category could be calculated. The results indicated that campers spent their time in the following activities: eating (16%), outdoor nature based activities (13%), social interaction (11%), creative (arts and crafts) activities (10%), personal grooming/maintenance (9%), resting (9%), waiting (8%), and group planning (7%), service projects (for camp and community) (6%), quiet and active games (each 5%), and all camp activities (2%). Over half (56%) of the campers' time was spent with a structured small group, either a cabin group, service project group, or an activity group. Almost half of the campers said they were doing activities that they wanted to do while a third said they had to do the activities.

On a 5-point Likert scale with 1=not at all and 5=very much, campers had the following mean scores: affect ($M=3.98$, $SD=.73$), potency ($M=3.50$, $SD=.95$), relaxation ($M=3.56$, $SD=1.05$), freedom ($M=3.70$, $SD=.92$), creativity ($M=3.57$, $SD=.95$), and motivation ($M=3.65$, $SD=.92$). Overall the psychological states were quite high for the campers with a consistent standard deviation.

Each of the campers was asked to indicate on a 4-point scale whether the primary activity they were doing was: 1="not challenging at all," 2="challenging a little," 3="challenging," 4="very challenging." In the same manner they were asked to indicate their ability for the activity: 1="not good at all," 2="not good at it," 3="I'm good at it," or 4="I'm very good at it." Only about 27% of the camp activities were "challenging" to the campers but they indicated they were "good at" 90% of the activities. By using z scores to control for response bias, individual means were calculated for each individual. Flow or nonflow was then calculated for each activity based on whether an activity resulted in challenge and skills above or below the individual's mean. It is important to keep in mind, as Csikszentmihalyi and LeFevre (1989) indicated that these proportions are intended simply to indicate the direction of a trend, not to be taken literally. How much time a camper spent in flow depends on how strict a definition of flow one wishes to use. Intense and complex flow experiences only occur a few times in an individual's lifetime; however, using our present definition, every time a person scored above his or her personal mean level of challenge and skill at the same time, he or she was assumed to be in some level of flow.

Thus, using a liberal interpretation of the concept of flow, it was found that 16% of camper's time was spent in flow (high challenge, high skills) as compared with 29% in anxiety (high challenge, low skills), 43% in boredom (low challenge, high skills), and 13% in apathy (low challenge, low skills). Table 1 shows the percentage of time a particular activity was likely to result in flow. As can be seen, flow experiences were most likely to be found in service projects, outdoor recreation, active games, and creative activities.

Several other aspects were found related to experiencing flow by the campers. Chi-square statistics indicated that a statistically significant difference between flow and nonflow was associated with gender of campers ($X^2=11.4$, 1df, $P=.00023$), with females much more likely to experience flow. Other analyses including the session at camp, time of day, involvement in other activities at the time of the primary activity, and why an activity was undertaken showed no statistically significant differences between flow and nonflow.

Quality of experience was also measured by affect, potency, motivation, creativity, relaxation, and freedom. As was consistent with other research, flow was directly related to four of these psychological measures. (See Table 2) As was consistent with other research, an analysis of variance statistic revealed that flow was statistically significant and positively related to affect (i.e., those campers having flow experiences were happier, more sociable, and felt they were in a friendly environment more than those in nonflow), potency (i.e., those campers in flow were more active, involved, and alert than those experiencing nonflow), creativity, and motivation.

Table 1

Time Spent in Flow and Nonflow Experiences Based on Camper Activities

Activity	Time Spent			
	Flow	Anxiety	Boredom	Apathy
Active Games	21%	64%	10%	5%
Outdoor Rec Activities	24%	59%	13%	5%
Service Projects	26%	56%	9%	9%
Creative Activities	19%	58%	9%	14%
Resting	8%	-	74%	18%
Social Interaction	16%	9%	62%	13%
Eating	13%	2%	79%	7%
Quiet Games/Activities	18%	23%	40%	20%
Group Planning/Preparation	11%	40%	36%	13%
Personal Grooming/ Maint.	15%	25%	48%	11%
Waiting/Sign-up	10%	16%	49%	27%
All Camp Activities	5%	-	59%	36%

N=47 Responses=910

Some differences existed on several dimensions pertaining to psychological variables. No differences were found between boys and girls on affect, freedom, creativity, and motivation. Boys were, however, more active (potency) and relaxed in psychological states than were the girls at camp. A difference among campers was reflected in the two camp sessions that were sampled with psychological variables higher in the second session, although flow was consistent between both sessions. Campers had higher potency scores (were more active, excited, alert) in the afternoon but none of the other psychological factors had a relationship to time of day. Campers generally had the lowest affect, potency, freedom, creativity, and motivation scores when they were alone, and the highest when they were with one, two, or more people (but not in a structured group). Campers had the highest psychological scores when they felt they wanted to do an activity as opposed to when they "had to" or "had nothing else to do."

Table 2

An Analysis of Variance of the Effects of Flow on Campers' Psychological Quality of Experience

Quality of Experience	Nonflow X	Flow X	Flow F Value	Stat Sig.
Affect (happy, sociable, friendly)	3.91	4.20	18.18	.000*
Potency (alert, active, excited)	3.42	3.84	23.43	.000*
Relaxation	3.50	3.64	14.78	.155
Freedom	3.65	3.81	3.71	.054
Creativity	3.50	3.82	12.85	.000*
Motivation	3.61	3.88	9.61	.002*

N=47 Responses=910

Psychological scores of enjoyment were also related to the activities in which campers participated. The highest affect scores were found in active games, outdoor recreation activities, eating, service projects, social interaction, and waiting. The highest potency scores were related to active games and outdoor recreation as would be expected given the definition of potency and the nature of these activities. Campers felt the most freedom when they were involved in active games, many of which were done during their "free" time. Creativity was most apparent in creative arts times and in active games. Campers indicated they were most motivated when involved with active games, outdoor recreation activities, creative arts, and social interaction.

Discussion

Based on this exploratory study, several conclusions can be drawn. Camp is a place where children can experience flow. The descriptive data suggest that the challenge for a number of the activities was not high, thus resulting in more boredom and apathy than anxiety or flow, but overall the campers seemed quite happy, active, motivated, relaxed, free, and creative. Experiences that were more likely to provide an opportunity for flow were "doing" oriented activities such as service projects, outdoor recreation pursuits, active games, and creative opportunities.

As has been suggested in other studies using flow as the theoretical framework, flow can happen anywhere, at any time, provided that the person's capacities and the opportunities for action in the environment are matched (Csikszentmihalyi & Csikszentmihalyi, 1988a). Virtually all aspects of camp ranging from very active undertakings such as whitewater rafting to walking/talking with cabinmates had the potential for flow.

If camp directors believe that optimal experience, as measured by flow and other psychological factors, is an important outcome for campers, then it may be useful to examine how a camp setting may be organized to facilitate the potential for flow experiences. Mitchell (1988) suggested that rationalization has prevented many of us from finding flow in everyday activities because we don't have words for our experiences, we separate it from functions of life, and we

become disenchanted with life (i.e., we feel alone, spiritually lost). Therefore, program directors and staff at camp may want to pay particular attention to how to provide challenging opportunities and yet provide enough skill development for campers to be successful. They may also want to help campers think about the experiences they are having and see how microflow (i.e., those brief moments of feeling one's abilities match the challenges of the moment) can be just as important as major "flow" events. Activities must have clear goals and provide quick and unambiguous feedback-- one cannot experience flow when one does not know what to do or does not get feedback. Staff may need to pay particular attention to making sure skills are just right and the challenges or demands are above average. The goal of camps is not to have campers in "flow" 100% of the time. It is periods of nonflow which make flow experiences most meaningful. Perhaps particular programs should be targeted as "flow-potential" with the notion that flow may occur on the microlevel in daily activities as well as in moments of "peak experiences." Perhaps as Logan (1988) suggested, addressing flow requires that one breaks up one's day as well as fills one's day. A variety of activity with a focus on various challenge and skill levels may be a framework for developing camp activities using flow as the model.

Additional ideas for creating flow include encouraging campers to have positive thinking, to be flexible, to show a sense of humor, to see and encourage others to experience flow, to seek new learning experiences, and to take time to relax. Perhaps in order to experience flow, we really need to have spaces when it doesn't occur. Further, to remain in flow, one must increase the complexity of the activity by developing new skills and taking on new challenges (Csikszentmihalyi, 1988a). The concept of "spiraling complexity" (Csikszentmihalyi, 1988a, p. 30) may be a focus that camp programmers can address particularly as the camp session goes on.

Another dimension that may be worth pursuing in the future is the way that a flow experience at camp may extend beyond the momentary experience (Fave & Massimini, 1988). One of the goals of camps is that campers will seek positive group living experiences in the outdoors again and again (not only in camp but elsewhere). The uniqueness of the camp experience may be the exhilaration, energy and fulfillment that may not be commonly experienced elsewhere in people's lives. (Csikszentmihalyi, 1988a) Another challenge relates to how one's sense of challenge and skill be taken home and used in other situations in life. How can campers be encouraged to seek flow in their undertakings outside of camp?

As has been noted, this study was an initial quantitative exploration into the dimensions of flow and optimal experience in the camp setting. Obviously many more questions remain to be addressed if we are to understand the camp experience using this framework of optimal experience. For example, how does flow relate to the quality of leadership and the preparation given for an activity? How does it relate to the enthusiasm of the leaders? How does the organization of the camp impact upon the flow experience in terms of the structure of the day? Based on previous research on other populations, it appears that the experience that campers have with flow in camp is no different than the experience that others have had with flow in other settings. The very nature of camp makes it a place where flow experiences have a great deal of potential. The challenge is in maximizing the experiences to allow for the opportunities for flow to occur.

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The Adventure-Based Counselor as a Group Counselor

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Abstract: Through the use of a group counseling format in conjunction with the adventure activities, participants in the growing number of adventure-based counseling programs are gaining a better understanding of the consequences of their behavior patterns. The purpose of this investigation was to identify those group counseling skills relevant to adventure based counseling. The subjects were the supervisors and counselors from the adventure based programs. Participants were asked to respond to a mailed questionnaire. Through this investigation, those skills relevant to adventure-based counseling were identified. The investigation was designed to take the first steps in examining adventure-based counseling as a form of group counseling. If the practitioners in this field are to establish credibility within the larger counseling field, they need to demonstrate that standards exist and that training can provide established skill competencies.

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Adventure-based counseling is a non-traditional, experiential based process for providing therapeutic interventions to serve a variety of clientele involved in a mental health care system (Kimball, 1983). Adventure-based counseling programs have been designed for adult and juvenile criminal offenders (Golins, 1978; Wichmann, 1991), psychiatric patients (Stitch, 1983; Stitch & Senior, 1984; Witman, 1989), emotionally disturbed youth (Bacon & Kimball, 1989; Byers, 1979), victims of sexual abuse and domestic violence (Webb, 1990), individuals with alcohol and drug dependency (Chase, 1981; Gass & McPhee, 1990), and families in crisis (Bandoroff & Scherer, 1990; Creal & Florio, 1986; Clapp & Rudolph, 1990; Gillis & Bonney, 1986).

Stitch and Gaylor (1983) described an adventure-based counseling program as "a series of physical and social tasks, where the presence of stress, uncertainty and the need for problem-solving, communications, and immediate judgment provide situational analogies for problematic areas in the [client's] daily life" (p. 2). During the adventure-based counseling program, participants engage in a series of mentally and physically challenging activities such as trust building activities, group initiative activities, adventure challenge courses, camping, outdoor cookery, camping, extended wilderness trips, rock climbing, canoeing, and wilderness solos (Gass & McPhee, 1990). This form of counseling uses techniques and activities, which often take place in the outdoors, to enhance self-esteem, increase levels of trust in others, and lower recidivism and relapse rates of maladaptive behaviors of the participants served in these programs (Stitch, 1983; Wichmann, 1991). Through involvement in the adventure activities and the accompanying group processing sessions, attitudes such as learned helplessness, poor self-image, mistrust, and lack of self-confidence are replaced with self-confidence, self-efficacy, a trusting of others, and with new, creative methods for solving personal problems (Chase, 1981).

The adventure-based counselor uses small group dynamics to accentuate the therapeutic potential of the activities. Group discussions often become the key to learning and behavioral change during these programs. During and following the activities, discussions or processing sessions led by the adventure-based counselor focus on having the participants identify and understand their intra- and interpersonal behavioral patterns (Stitch, 1983).

To maximize the therapeutic potential for each participant, the adventure-based counselor must have a broad and thorough knowledge of interpersonal and group facilitation techniques (Bankie, 1983). This knowledge may be as important as the knowledge of canoeing, rock

climbing, or camping skills in determining the overall outcome of the adventure program and to insure the psychological safety of the participants.

A weakness of the leadership of many adventure programs is the lack of skills among adventure-based counselors in the area of human relations (Bankie, 1983). Technical skills are stressed because of the inherent danger of the adventure activities. The technical skills and knowledge needed to manage the physical dangers have been identified, expounded upon, and recognized by general adventure program practitioners (Bankie, 1983).

The "people" skills side of adventure leadership often is neglected (Phipps, 1988). The adventure-based counselor often lacks the skills to effectively manage the interpersonal problems and group process issues that typically face the participating group members (Bankie, 1983).

This study was designed to address this problem by identifying those group counseling skills that are relevant to adventure-based counseling. More specifically, this investigation sought to answer the following questions:

1. What group counseling skills are relevant to adventure-based counseling programs?
2. What group counseling skills, in addition to those identified by Corey (1981, 1985), are relevant for adventure-based counselors?

Importance of the Study

At least 137 organizations in the United States, as identified in the Association for Experiential Education's Directory of Alternatives in Mental Health, Corrections, and Special Populations (Gass, 1988), offer adventure-based counseling to special needs populations. "The fastest growing trend in [Project Adventure] adoptions since 1982, has been the Special Needs or Therapeutic area" (Schoel, Prouty, & Radcliffe, 1988, p. 8). As the field continues to grow, an increased need for qualified and competent adventure-based counselors also continues to grow. A lack of consensus exists however, on what the group counseling competencies of the adventure-based counselor are and how they are best obtained (Cosgrove, 1984).

This study is important for a second reason. The field of adventure-based counseling is struggling to gain credibility with the larger counseling field. Anything which is as contrary to the mainstream way of doing things, as is adventure therapy, needs every bit of evidence it can possibly gather if it is to gain recognition and credence (Bankie, 1983). Thus, practitioners in this field need to demonstrate that they possess those skills that are acceptable to the larger counseling field.

At the practical level, the identification of desired group counseling skills and current training needs would assist adventure-based counseling program designers and trainers in developing more effective and appropriate staff development program agendas. The results of this research could help meet the need for developing an adventure counselor education program that provides for comprehensive group skill competency and offers nationally accepted and recognized group counseling skill standards.

Subjects

The subjects for this study were counselors and their supervisors of organized adventure-based counseling programs in the United States. The sample was drawn from those programs that have been self-identified through the Association of Experiential Education's Directory of Adventure Alternatives in Corrections, Mental Health, and Special Populations (Gass, 1988). This directory was developed by information gathered from a survey distributed in the spring and

summer of 1988 to all known programs that used adventure programming with special needs populations.

Development of the Survey

The instrument for this study was a survey to identify demographic information and opinions about relevant group counseling skills for adventure-based counseling. A list of 22 group counseling skills was presented to the survey recipients. This list was generated by Gerald Corey (1981, 1985), a leading practitioner and prolific writer in the field of group counseling.

The counselors and their supervisors were asked to rate each of Corey's group counseling skills on their relevancy to adventure-based counseling. The respondents were asked to rate each skill on a 4-point Likert scale continuum with the responses of "absolutely relevant," "relevant in most situations," "relevant in a few situations," and "not relevant" for the adventure-based counselor. Both subject groups were also asked to respond to an open-ended question, "What group counseling skills, in addition to those identified by Gerald Corey, do you believe are relevant for adventure-based counselors?"

Review of the Survey

After an original draft of the survey was developed, it was submitted to the three members of the Doctoral Dissertation Committee and a faculty member from Northern Illinois University's Public Opinion Lab. This panel made suggestions for improving the technical and content areas of the survey.

Following revisions to the original draft of the survey, it was pilot tested on a panel of four adventure-counseling practitioners. The purpose of the pilot test was to help eliminate any ambiguous items and to improve the format of the survey and accompanying cover letter. Information gathered from the pilot test was used to refine the survey.

Procedures

Data collection procedures included the use of surveys and telephone contacts. Each of the program directors listed in the Directory of Adventure Alternatives in Corrections, Mental Health, and Special Populations (Gass, 1988) was contacted via telephone. In addition, telephone contacts were conducted to ask permission to send the surveys, inform the directors of the purpose of the survey, elicit their support in completing the survey, and ask them to encourage their staff to complete the surveys. The survey and the cover letter were sent by mail to the adventure-based counselors and their supervisors.

Data Analysis

The data gathered through the surveys was analyzed by computer using the Statistical Package for the Social Sciences (S.P.S.S.) computer program. Return rates and demographic data were reported in terms of frequency rates. Marginal tabulations were used to analyze the first research question, "What group counseling skills are relevant to adventure-based counseling programs?" The mean rating for each group counseling skill was reported.

The second research question, "What group counseling skills, in addition to those identified by Corey, do you believe are relevant for adventure-based counselors?" was asked as an open-ended question. Since this data set was qualitative, it was analyzed through a classification and coding process. The data were reviewed twice. During the first review, categories of responses were identified. Following the development of categories, the responses were reviewed

a second time and each response was coded into a category. The number of responses per category were then tabulated. The results are reported in categories of response percentages, the number of responses per category, and representative comments for each category.

Results

Return Rates

The supervisors and/or counselors from 103 of the 137 organizations were sent surveys. The remaining 34 organizations were excluded from the study because 16 were no longer operating, 5 could not be contacted by telephone, 3 joined with other existing organizations, 3 were larger clearinghouse operations, 3 did not classify themselves as adventure-based counseling, 3 stated they did not have the time nor resources to complete the surveys, and 1 was a Canadian listing.

A total of 786 surveys were distributed. The breakdown between the two subject groups, supervisors and counselors, was 193 and 693 respectively. The overall response rate was 234 usable surveys or 30% of the mailing. Thirty-eight percent ($n = 73$) of the supervisors and 23% ($n = 161$) of the counselors returned the survey.

Demographic Information

Organizational Demographics. The populations served by the organizations in this survey included psychiatric inpatient, juvenile corrections, adult corrections, mental health (e.g., addictions, sexual victims and perpetrators, and terminal patients), developmental disabled, emotionally disturbed, learning disabled, neurological impaired, physically disabled, and families. The types of adventure activities used by these organizations included rock climbing, ropes courses, New Games and group initiatives, canoeing and rafting, backpacking, caving, orienteering, cross country skiing, horseback riding, urban adventures, residential camping, and community service projects. The average length of program ranged from one day to over a month and the average number of clients served per year ranged from one to over 1000.

Respondent Demographics. The supervisors had a ratio of 64.4% males and 35.6% females, while 54.7% of the counselors were male and 45.3% were females. The mean age of the supervisors was 34 years old, while the mean age of the counselor group was 30. The highest educational degrees of the supervisors were Doctorate (1.4%), Master's (41%), Bachelor's (52%), Associate's (4%), and high school (1.4%). The counselors' highest educational levels were Doctorate (1.9%), Master's (26%), Bachelor's (58%), Associate's (5.6%), and high school (8%). See Table 1.

The supervisors reported they had a mean number of 3.0 years experience in the field of adventure-based counseling and an average of 2.6 years experience as a counselor supervisor. The counselors had an average of 2.3 years of experience in adventure-based counseling.

Findings About Research Question #1: "What group counseling skills are relevant to adventure-based counseling programs?"

This section presents the findings to the part of this investigation that examined the relevant group counseling skills for the adventure-based counselor. Table 2 presents the results of the survey that asked respondents to rate the 22 group counseling skills on their levels of relevancy for adventure-based counseling. The means ranged from 1.14 to 2.09 on a 4-point Likert Scale. These results demonstrate that the combined supervisor and counselor groups believed that all of the skills are always relevant or relevant in most situations.

Table 1

Percentages of Educational Degrees of the Supervisor and Counselor Respondent Groups

Highest Educational Degree	Supervisors	Counselors
Doctorate Degree	1%	2%
Masters Degree	41%	26%
Bachelors Degree	52%	58%
Associate Degree	4%	6%
High School	1%	8%
N=234		

The responses with the highest mean relevancy ratings were supporting (1.14), facilitating (1.22), active listening (1.27), modeling (1.36), and evaluating (1.39). Disclosing oneself, interpreting, protecting, and dealing with silence had the lowest mean ratings of 2.09, 2.00, 1.99, and 1.97, respectively.

Findings About Research Question #2: "What additional group counseling skills do adventure-based counselors and their supervisors believe are relevant for adventure-based counseling programs?"

Following the coding and categorizing process, additional group counseling skills (with four or more responses) for the adventure-based counselor were identified. These skills along with response rates and representative responses are described in the following paragraphs (see Figures 1,2 and 3).

Relational Skills. Relational skills led the list of the most frequently stated responses with 23 or 10% of the total respondents listing it as an important group skill for adventure-based counselors. Responses coded into this category made a direct reference to the counselor/client relationship.

Empowering Clients. Empowering, along with the use of humor or fun, tied as the second most frequently cited group counseling skill with 14 responses or 6% of the subjects. Two supervisors (2.8%) and 12 counselors (7.4%) mentioned this skill as being an additional relevant skill.

Total Respondents' Mean Ratings of the Relevancy of Group Counseling Skills

Group Counseling Skill	Mean Relevance
Supporting	1.14
Facilitating	1.22
Active Listening	1.27
Modeling	1.36
Evaluating	1.39
Goal Setting	1.44
Questioning	1.44
Summarizing	1.45
Clarifying	1.47
Terminating	1.49
Giving Feedback	1.49
Reflecting Feelings	1.56
Empathizing	1.63
Confronting	1.63
Initiating	1.77
Blocking	1.82
Suggesting	1.87
Restating	1.89
Dealing with Silence	1.97
Protecting	1.99
Interrupting	2.00
Disclosing Oneself	2.09

Use of Humor and Fun. Use of humor and fun was also second on the list of responses with 6% (n=14) of the total number of subjects mentioning it. Four (5.5%) of the supervisors and 10 (7.4%) of the counselors listed this skill. One or both of these terms were used directly in all of the responses, thus, making coding of these items clear.

Flexibility. Flexibility was mentioned by 5.6% (n=13) of the subjects making it the fourth most listed response. The supervisors mentioned it four times or 5.6% of the subject pool, while nine (5.6%) of the counselors mentioned flexibility. Most of the subjects used the word flexible in their response.

Self-Analysis. The fifth most cited response fell into the self-analysis category with 4.7% (n=11) of the respondents making a response that fit into this category. Seven percent (n=5) of the supervisors and 3.7% (n=6) of the counselors had a response that fit into this category. The types of responses coded into this category made a reference to an awareness of self, as a counselor, and one's thoughts, behaviors, and feelings as a group facilitator.

Tone Setting and Framing. "Framing the activities," "preparing the group for the upcoming activity," "establishing a forum for positive group interaction" and "setting the tone" were the types of responses coded into the tone setting and framing category. This category represented the viewpoints of 4.3% (n=10) of the total number of respondents with 4% (n=4) of the supervisors and 4.3% (n=7) of the counselors making this response.

Tailoring. The category of tailoring included comments such as, "recognizing the needs of the group and setting up programming to meet these needs," and "structuring the activities to meet the needs and purposes of the group." Nine (3.9%) of the survey respondents (4.2% of the supervisors and 3.7% of the counselors) mentioned these types of responses.

Processing and Transferring Learning. The processing and transferring learning category was listed by nine or 3.9% of the respondents. Four (5.6%) of the supervisors and five (3%) of the counselors believed this skill category is an important group counseling skill for the adventure-based counselor. Most of the respondents, listing this response, used these terms making coding of these items clear.

Use of Metaphors. Eight or 3.4% of the respondents (2.8% of the supervisors and 3.7% of the counselors) listed the use of metaphors as an important skill for adventure-based counselors. The exact terminology, use of metaphors, was used by all of the respondents.

Structuring Through Control, Firmness, and Discipline. Responses coded into this category made a reference to structuring the group and setting standards through the use of control, firmness, and discipline. The structuring category of responses was listed by 3.4% (n=8) of the total number of respondents with 5.6% (n=4) of the supervisors and 2.5% (n=4) of the counselors listing it.

Understanding Group Dynamics. This category was best exemplified by the respondent comment, "understanding the mechanics of group dynamics." It was perceived by 3% (n=7) of the respondents (2.8% of the supervisors and 3.2% of the counselors) as a group skill that is relevant for the adventure-based counselor.

Genuineness. All responses in this category except one ("the ability to be real") were identified by the term, genuineness. Three percent (n=7) of the respondents listed genuineness with 2.8% (n=2) of the supervisors and 2.5% (n=4) of the counselors mentioning it.

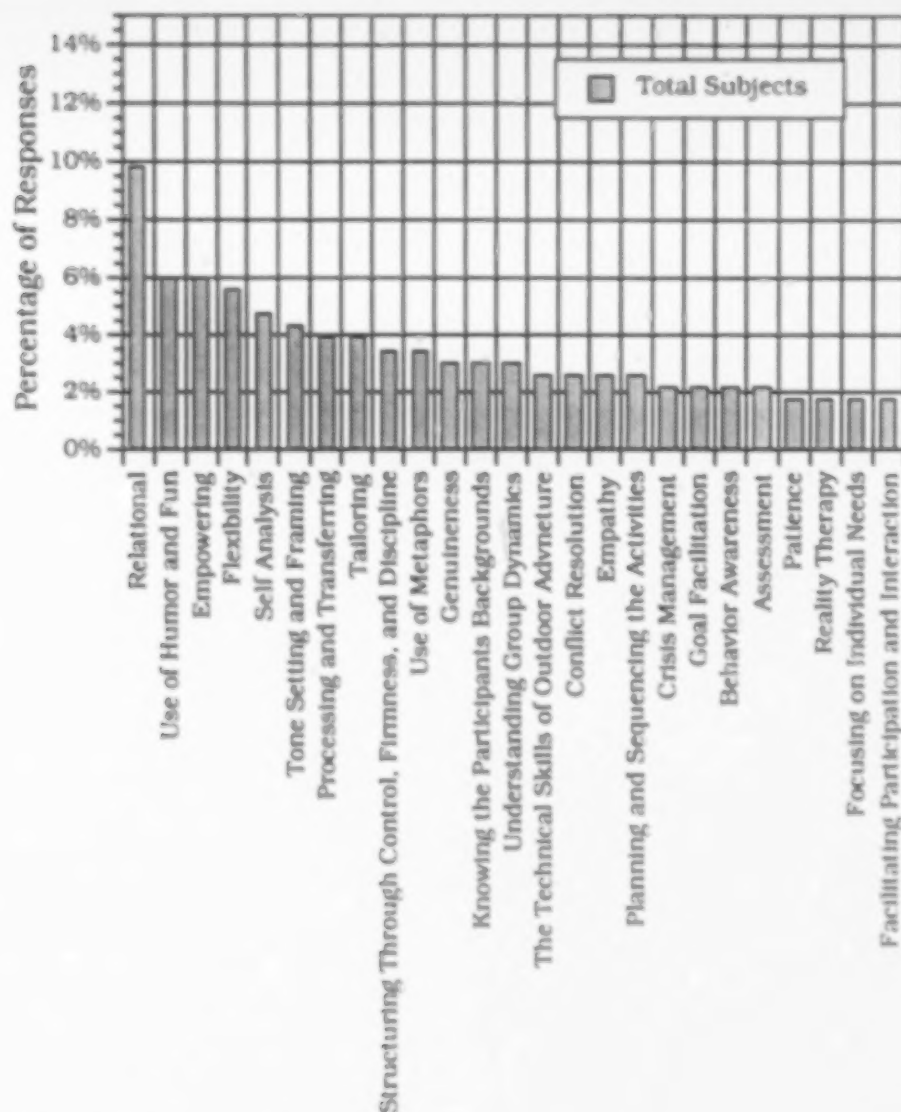


Figure 1. Additional Group Counseling Skills of the Adventure-Based Counselor as Identified by All Respondents (n=234)

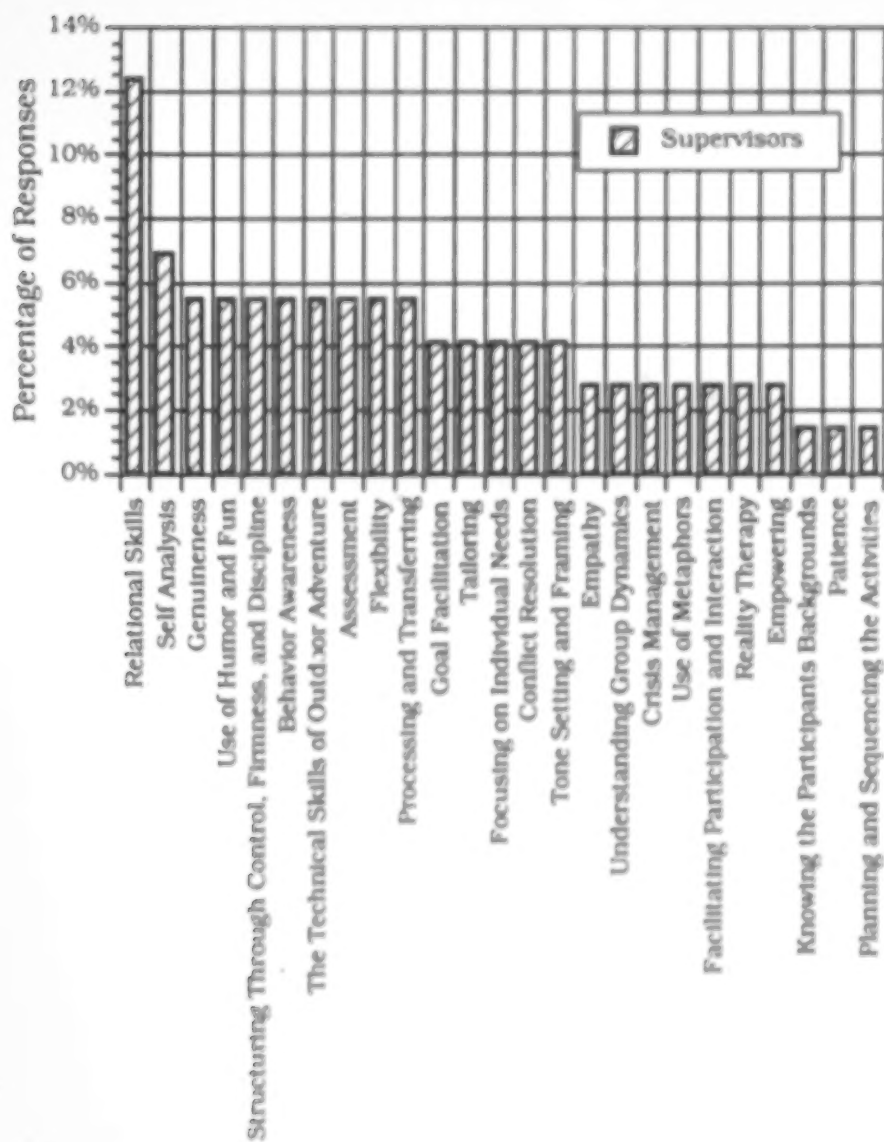


Figure 2. Additional Group Counseling Skills of the Adventure-Based Counselor as Identified by Supervisors (n=73)

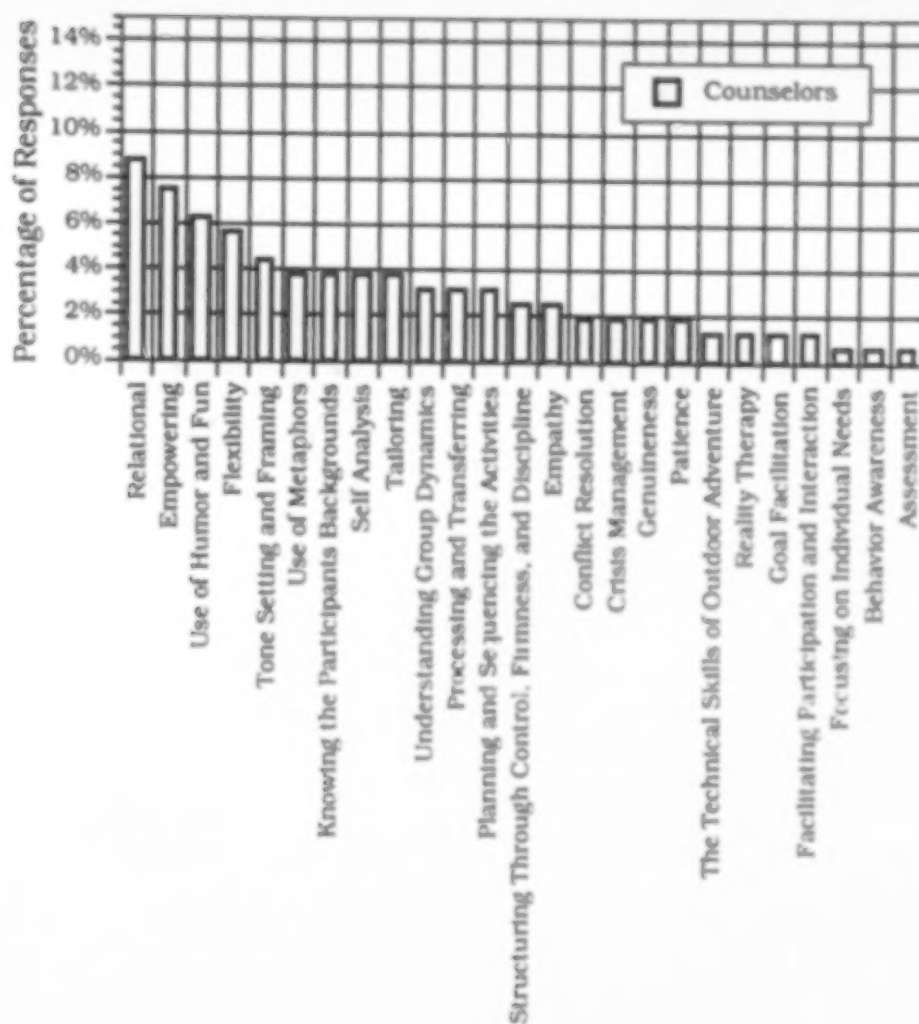


Figure 3. Additional Group Counseling Skills of the Adventure-Based Counselor as Identified by Counselors (n=161)

Empathy. When the respondents listed empathy or compassion as part of their comments, it was coded into this category. Six respondents listed an empathy response. Two (2.8%) supervisors and four (2.5%) counselors had this type of response.

Conflict Management and Resolution. Conflict management and resolution skills, which were identified by similar terminology, were viewed as relevant by 2.6% (n=6) of the respondents. It was perceived as relevant by 4% (n=3) of the supervisors and 1.9% (n=3) of the counselors.

Knowing the Participants' Backgrounds. Comments such as "knowledge of the participants' backgrounds," and "comfort with a particular population" were coded into this category resulting in a total of seven responses (3%). One supervisor and six counselors believed that knowing the participants' backgrounds is a relevant group counseling skill for the adventure-based counselor.

The Technical Skills of Outdoor Adventure. Those skills that directly related to facilitating the technical aspects of adventure activities were coded into this category. Responses fitting into this category were mentioned by six (2.6%) of the respondents (5.5% of the supervisors and 1.2% of the counselors).

Planning and Sequencing. Six respondents listed planning and/or sequencing of the program activities as a relevant group counseling skill for the adventure-based counselor. The supervisor/counselor breakdown for this listing was 1 and 5 respectively.

Other Group Counseling Skills Identified as Being Relevant to Adventure-Based Counseling. Many categories were established that had response rates of five or four responses per category. They are described briefly without any discussion of representative comments or supervisor/counselor breakdowns because of their low response rate.

Four group counseling skills had a response rate of 2.1% (n=5) each. They were crisis management, behavioral awareness, assessment, goal facilitation. Four categories had a total of four responses each. Each category represented 1.7% of the subjects. These categories were the use of reality therapy, facilitating interaction among the participants, focusing on individual needs in a group setting, and patience. Use of "I-messages," active participation by the adventure-based counselor, problem solving skills, and open-mindedness had three responses. Each represented 1.3% of the total sample.

Discussion

The mean ratings of both the supervisor and counselor groups demonstrated that all 22 group counseling skills presented in the survey were considered either always relevant or relevant in most situations. These findings confirm that those group counseling skills recommended for use in the more traditional group counseling settings are also perceived as relevant to the field of adventure-based counseling. Kimball (1986) has stated that adventure-based counselors need to have the knowledge and skills of basic psychotherapy. These results support Kimball's (1986) position.

When asked to list additional group counseling skills relevant to adventure-based counseling, 25 additional skills, each with a response rate of four or more, were suggested. Relational skills, those skills that assisted the counselor in developing a positive relationship with their clients, had the highest response rate. Other high frequency responses listed by both the counselor and supervisor groups included flexibility and the use of humor and fun. Given the nature of adventure programming it is not surprising to find that these three skills were listed by the

respondents. The relationship between the counselor and participants is important in order to help them process their emotional responses. The use of humor and fun is an inherent part of the adventure activities. Finally, flexibility is important in that activities often produce unexpected individual and group responses.

Conclusions

This study examined if and to what extent adventure-based counseling practitioners perceived and used the adventure experience as a therapeutic one rather than a recreational or educational one. More specifically, this investigation sought to examine if and how adventure-based counseling was being used as a form of group counseling.

This section briefly addresses some the conclusions drawn from this investigation and are based upon this general purpose.

1. Based on the results of this investigation, it appeared that adventure-based practitioners believed strongly in the therapeutic component, specifically the group counseling component, of the adventure-based counseling programs. This conclusion was supported by the results that demonstrated that all of the 22 group counseling skills identified by Gerald Corey were rated as either always relevant or relevant in most situations within an adventure-based counseling setting. This conclusion was also supported by the fact that almost all of the responses to the open-ended question addressing those additional group counseling skills relevant to adventure-based counseling were of a therapeutic nature rather than a recreational or educational one. Of the additional 25 skills, only one, the category of "The Technical Skills of Outdoor Adventure" did not directly relate to the therapeutic aspects of the adventure program.

2. As previously stated, all 22 group counseling skills, as identified by Corey, were seen as always relevant or relevant in most adventure-based counseling situations. Given these results, it seems important that these skills are consistently used by the adventure-based counselor. Adventure-based counseling program administrators need to insure that their counselors demonstrate competence in using these skills. Training experiences should be designed to help counselors become proficient at using these skills.

This investigation was designed to examine adventure-based counseling as a form of group counseling. If the practitioners in this field are to establish credibility to the larger counseling field, they need to demonstrate that standards exist as to the skills required of the adventure-based counselor and that there are educational and training guidelines recommended for the adventure-based counselor.

In conclusion, this investigation addressed the following question "What group counseling skills that are relevant for adventure-based counseling?" This investigation took some important first steps in perceiving and establishing adventure-based counseling as a legitimate discipline that utilizes group counseling theories and practices.

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A Psychological Rationale for Adventure Therapy with Hospitalized Adolescents

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Abstract: Inpatient and residential therapeutic programs for adolescents are often fairly generic in format relying heavily on traditional, insight-oriented approaches to treatment without regard to how the intellectual functioning of the adolescent might impact upon therapeutic effectiveness. This study examined the WISC-R profiles of two treatment populations and presented a theoretical rationale for using adventure based treatment based upon the participants performance on verbal and performance subscales. It is hoped that the article might be used to help justify the implementation of adventure therapy in psychiatric treatment facilities and lead to further research to test the proposed hypotheses.

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Introduction

Therapeutic programs for adolescents are often fairly generic in format and treatment offerings, designed to address a range of issues common to this stage of development such as family conflict, substance abuse, communication skills, and sexuality. Test profiles associated with intellectual deficits of delinquency (Graff & Hubble, 1981), conduct disorder (Hogan & Quay, 1984; Paget, 1982), and other types of emotional and behavioral problems (Dean, 1977) have been identified with adolescent populations. Two findings appear consistent when troubled youth are evaluated using standardized intellectual tests: (a) Full Scale IQ scores are below the average for their age groups by approximately 8 to 12 points (Hirschi & Hindlang, 1977; Culbertson, Feral, & Gabby, 1989) and (b) Verbal IQ scores and other measures of linguistic facility are significantly lower than Performance IQ scores measuring perceptual and psychomotor skills (Kaufman, 1976; Walsh & Beyer, 1986).

Little attention, however, has been given to how intellectual deficiencies might mediate therapeutic interventions for such adolescents. In the present study we have attempted to identify an intellectual profile of variously diagnosed adolescents treated in two different settings: (a) a general psychiatric unit and (b) a residential substance abuse treatment facility. The profile will be used to make inferences about how best to intervene psychotherapeutically with these adolescents.

The data for the first group were obtained from the psychological testing records of 150 randomly selected inpatients (81 males, 69 females) treated on a 20-bed adolescent unit of a private psychiatric hospital during a three year period. The hospital was located in a smaller metropolitan area (population approximately 286,000) serving surrounding rural counties. The average length of stay was 38 days. Data from the second group were obtained from 47 participants (36 males, 9 females) in an adventure-based residential treatment facility for substance abusing adjudicated adolescents over a one year period. The facility was located in a smaller community (population approximately 12,000) serving state youth development institutions.

Chronological ages of both groups range from 12 to 17 years, with a mean of 14.7 years for the first group and a mean of 15.7 years for the second. Racial membership for the first group was 81% white and 19% black while the second group was 38% white and 62% black. Diagnoses for the first group included mood disorders, disruptive behavior disorders, anxiety disorders, eating disorders, psychotic disorders, substance abuse, and significant personality and adjustment disorders while the second group was primarily substance abuse, oppositional, and conduct disorders.

Procedure

Subjects were assessed by certified psychometrists, with the Wechsler Intelligence Scales for Children-Revised (WISC-R) administered as part of a comprehensive interdisciplinary evaluation. Scores from all subtests regularly administered were included in the analyses. Results from Mazes, an optional subtest, were omitted because it was administered only occasionally.

Results and Discussion

From the subscale data for each group presented in Tables 1 and 2, WISC-R subscales indicate that both groups of adolescents demonstrated relative strengths in verbal concept formation and information processing (i.e., in the subtest Picture Arrangement they can apply newly learned skills to new situations). Relative weaknesses for both groups included their learning ability and knowledge related to academic scholarship and their ability to provide specific answers to given social situations (from the subtests Information and Vocabulary).

Globally the data suggested both groups of adolescents were poorly equipped to deal with verbally-mediated attempts to develop insight, to self-reflect or consider the perspective of others, or to report such experiences if they occurred. Traditional insight oriented intervention strategies are perhaps "going against the grain" of the adolescent's intellectual structure and will likely lead to increased feelings of frustration, inferiority, and disappointment in the process of therapy for both therapist and adolescent.

Table 1
Verbal Subtest Scores Compared To Verbal Mean

SUBTEST	Inpatients	Delinquents
	M (SD)	M (SD)
Information	7.7 (2.7)	7.4 (2.3)
Similarities	9.2 (2.8)	9.2 (3.2)
Arithmetic	8.9 (2.5)	9.1 (2.6)
Vocabulary	8.1 (2.3)	7.38 (2.4)
Comprehension	8.1 (2.7)	7.9 (2.9)
Digit Span	8.9 (2.9)	9.2 (2.5)

The current data would theoretically support using an experientially-based therapy approach such as adventure therapy, as opposed to the traditional, verbally mediated insight therapy, as a primary therapeutic modality for the treatment of adolescents similar to those in this study. It is hypothesized that experiential approaches would be more effective with adolescents similar to those identified in this study since the adolescents in this study demonstrated an ability to apply newly learned skills to new situations. Adventure therapy currently being utilized as an adjunct to traditional therapeutic modalities (group and family therapy), provides concrete experiences where clients can *act* in ways that have direct consequences. In the discussions which follow the action (e.g., the adventure activity), clients similar to those in this study are more likely to be able to apply skills they learned in the activity to new situations as opposed to learning from insights gleaned in a traditional individual, group, or family format that is "mostly talk with little action."

It is hoped that adventure-based therapist might use such data to help theoretically justify implementing this type of treatment in an inpatient or residential facility. Psychologists and psychiatrists who understand the implications of this data base and serve in administrative capacities might help to further the use of adventure therapy by helping programs become implemented in places where short term, high impact treatments are needed.

Table 2

Performance Subtest Scores

SUBTEST	Inpatients M (SD)	Delinquents M (SD)
Picture Completion	9.8 (2.7)	9.6 (2.7)
Picture Arrangement	10.1 (2.8)	9.2 (2.6)
Block Design	9.5 (2.9)	9.7 (2.6)
Object Assembly	9.8 (3.0)	10.1 (3.1)
Coding	9.7 (2.9)	9.5 (3.1)

From the hypotheses raised in this study, future research should explore the ability of randomly assigned participants similar to our sample who are involved in inpatient or residential treatment to preform better in an adventure-based, experiential therapy program when compared with participants in a traditionally-based, insight oriented approach to treatment.

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Fear in Outdoor Education: The Influence of Gender and Program

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Abstract: Using the Situational Fear Inventory, outdoor course participants identified the degree to which they experienced social-based and physical-based anxieties at the beginning, middle, and end of their course. Levels of social-based fears were higher and more resistant to modification. Females expressed higher levels of fears. Most fears were reduced significantly through program participation.

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One interesting aspect of recreational activities taking place in a natural environment is the "push and pull" attributes of the experience. Similar to the dialectical view of leisure behavior (Iso-Ahola, 1980), for some, the outdoor recreation experience provides a number of appealing attributes while also presenting some challenging and anxiety-producing situations. Bass (1989) reports that this dualism in the outdoor recreation experience epitomizes a coming to terms with the subjective feelings experienced through situations that are challenging and with unexpected outcomes. For many, these outdoor recreation experiences are first experienced through a structured educational program taking place in a natural environment (Kaplan & Kaplan, 1989).

In an earlier study, Ewert (1988) identified situational fears before, immediately after, and one year following participation in Outward Bound, a wilderness challenge program. In addition, he found that individuals reported reduced levels of situational anxieties following participation in the program.

The purpose of this study was to identify and measure the levels of situational fears and anxieties held by participants of a different type of outdoor program and to measure fears during as well as before and after the course. Because gender was identified as an intervening variable in the previous study (Ewert, 1988), this study was also designed to determine if males and females report different levels of anxieties at the beginning, the middle, and end of the course. Based on the literature and past findings (Gray, 1987; Leary, 1982) it was expected that the items representing social-based fears (e.g., fear of confrontation in the group) would be rated more anxiety-producing than those representing physical fears (e.g., falling or becoming injured). It was also hypothesized that females would report higher levels of fear than males. Finally, based on the cognitive restructuring model (Beck, 1976), it was hypothesized that levels of anxiety would decrease significantly throughout the course.

Methods

Subjects in the study were college recreation and physical education majors completing separate, but similar Outdoor Education Practicum (OEP) courses at the Cortland College Outdoor Education Center in the Adirondacks. The OEP courses are notably different from the Outward Bound courses of the earlier study. The course, which runs for 13 days, includes a 5 or 6 day "pretrip" period at the Center and a 5 or 6 day extended canoe and/or backpacking trip in various wild forest areas of the Adirondack Park. The pretrip period at the Center is operated on a schedule that emulates life in a traditional, centralized summer camp. Activity periods are devoted to teaching camping skills and environmental awareness that will enhance students' readiness for

and enjoyment of the subsequent trip. The trips take place in remote areas and require primitive camping and traveling skills. Although involving physical and emotional stress, neither the trips nor the in-camp, pretrip experiences center around the systematic progression of challenges associated with the "Outward Bound" formula. The purpose of the OEP is to improve students' appreciation of the natural environment and to complement their professional preparation with knowledge and skills related to centralized camping, trip camping, and outdoor pursuits. Although differing programmatically and objectively from Outward Bound, the OEP, like Outward Bound, has been found to effect significant changes in self-concept (Young & Steele, 1989).

Subjects completed a version of the Situational Fear Inventory (Ewert, 1988) (1) upon arrival at the Center, (2) after completing the in-camp pretrip phase, and (3) following their backcountry trip. In completing the instrument, students responded to 33 potentially fearful situations by placing a slash (/) across a 10 cm. line ranging from "not at all anxious" to "very anxious." The measured distance from a zero point to a slash mark provided a numerical expression of the level of fear. A number of research questions were addressed in this study including the effects of pretesting. This report, however, is designed to provide a description of the type and level of fears expressed and the influence of gender. To determine any significant differences between the data, one-way ANOVAs with post-hoc Scheffe tests were utilized.

Findings

Across two summer seasons (1989-1990), individuals from eight courses consisting of 42 different trip groups were queried. From this sample, 380 usable questionnaires were obtained. Based on these data, the first hypothesis (social fears would be more anxiety-producing than physical-based fears) was supported. Figure 1 depicts the consistently higher average level of all social fears compared with physical fears at each point of measurement. A similar pattern is apparent when one compares the number of elevated mean scores (e.g., above 40.0) in Table 1 (social) with those of Table 2 (physical). The frequency of elevated social fears (26) is greater than that of physical fears (11) $\chi^2 (1, N = 168) = 10.844, p < .001$.

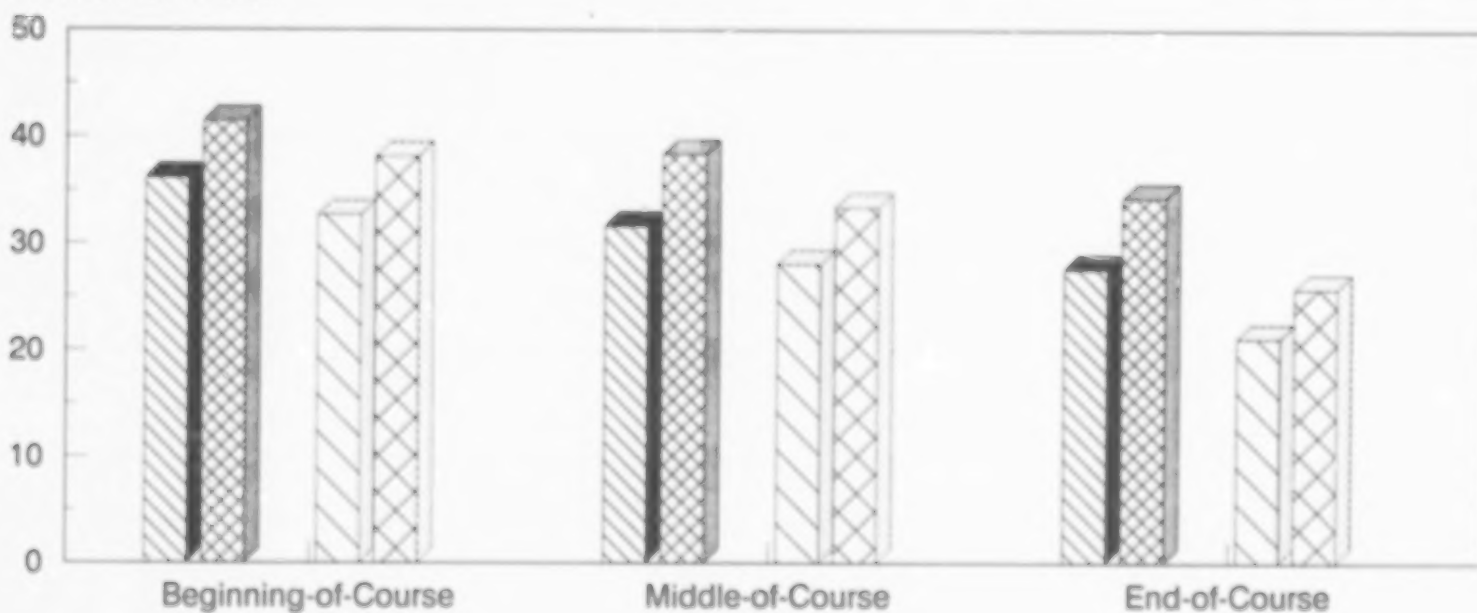
The data suggested gender differences at all three points of measurement (beginning, middle, and end of course), with females consistently reporting higher levels of anxiety (see Tables 1 and 2). These findings were particularly pronounced in the items of "letting others down," "not performing up to group expectations," and "letting myself down." In these cases and particularly for females, the level of fear remained relatively high. Comparing the occurrences of elevated (i.e., >40.0) fears of women and men in Table 3, the differences were significant $\chi^2 (1, N = 174) = 18.16, p < .001$.

The data also supported Hypothesis 3 with levels of anxiety consistently lessening with later measurements. All fear levels were reduced; 71.6% were reduced significantly ($p < .05$). In most instances, the degree and significance of fear reductions were similar for men and women. The timing of the significant change (pre- to mid-course and mid- to post-course) varied more widely.

As indicated in Table 4, the social fears, found earlier to be higher, were also more difficult to change. All physical fears, except the female's anxiety about insects, changed significantly. In contrast, only 12 (42.9%) of the social anxieties were reduced significantly.

Average Levels of Social and Physical Fears of Males and Females at the Beginning, Middle and End of Course

Level of Fear



 Social Fear
Male

 Social Fear
Female

 Physical Fear
Male

 Physical Fear
Female

Figure 1

Table 1

Changes in Social-Based Fears of Outdoor Program Participants

Expressed Fear	Gender	Course	Means				Difference
			Pre-Course	Mid-Course	End of Value	F p	
Unable to Control Social Environment	Male		37.9	32.8	25.7	12.8	.00
	Female		38.9	35.9	30.4	5.1	.01
Exposure to Unexpected Situations	Male		42.3	38.5	29.6	11.9	.00
	Female		46.4	45.9	33.8	14.0	.00
Making Wrong Decisions	Male		43.0	38.1	31.6	9.7	.00
	Female		49.0	47.7	40.1	5.8	.00
Letting self Down	Male		40.3	35.5	31.7	4.5	.01
	Female		49.4	47.3	43.7	1.5	.22
Letting Others Down	Male		49.9	44.2	39.9	5.6	.00
	Female		57.4	56.2	53.3	0.8	.44
Task Too Demanding	Male		42.5	35.1	26.3	20.2	.00
	Female		46.4	43.6	33.3	12.5	.00
Confrontation With Others	Male		32.0	28.7	26.3	2.4	.09
	Female		35.1	31.0	30.6	1.3	.29
Going Unrecognized in Group	Male		31.1	26.1	25.0	3.4	.04
	Female		34.7	29.7	29.4	1.8	.17
Not Performing Up to Group	Male		39.0	33.0	31.2	4.1	.02
	Female		50.0	45.6	40.6	4.5	.01
Expectations Not Fitting in With Group	Male		35.2	31.1	28.8	2.8	.06
	Female		41.3	36.7	35.0	2.0	.14
Not Performing Up to Leader	Male		38.7	35.1	31.5	3.3	.04
	Female		45.6	44.5	40.9	1.2	.31
Expectations Being Sexually Harassed	Male		18.0	14.0	13.7	2.1	.12
	Female		28.6	23.1	23.0	1.5	.22
Not Getting Money's Worth	Male		28.9	26.4	22.0	3.5	.03
	Female		27.3	21.7	21.1	2.3	.10
Course Not Meeting Expectations	Male		26.5	23.7	22.5	1.3	.27
	Female		29.9	27.7	24.2	1.9	.15

Table 2

Changes in Physical-based Fears of Outdoor Recreation Participants

Expressed Fear	Gender	Course	Course	Means			F	Difference
				Pre-Course	Mid-Value	End of p		
Unable to Control Physical Environment	Male	39.6	37.9	25.4	17.9	.00	.00	Pre/Middle-Post
	Female	42.5	40.4	32.3	6.9	.00		Pre/Middle-Post
Bad Weather	Male	35.0	33.7	21.3	15.8	.00	.00	Pre/Middle-Post
	Female	42.6	38.6	23.0	23.4	.00		Pre/Middle-Post
Poisonous Plants	Male	29.6	21.7	15.9	15.3	.00	.00	Pre-Middle/Post
	Female	33.9	27.3	18.0	15.7	.00		Pre/Middle-Post
Poisonous Snakes	Male	36.2	26.9	21.6	11.4	.00	.00	Pre-Middle/Post
	Female	48.4	38.6	31.3	9.5	.00		Pre-Post
Darkness	Male	27.7	23.1	17.9	7.2	.00	.01	Pre-Post
	Female	31.3	27.8	22.6	4.3	.01		Pre-Post
Dangerous Animals	Male	38.6	33.7	22.7	16.1	.00	.00	Pre/Middle-Post
	Female	47.1	41.0	29.6	14.9	.00		Pre/Middle-Post
Insects	Male	42.7	38.7	29.8	9.4	.00	.03	Pre/Middle-Post
	Female	46.1	44.3	37.3	3.5	.03		No Difference
Becoming Sick	Male	31.0	26.1	22.3	6.0	.00	.00	Pre-Post
	Female	35.6	32.1	25.3	6.0	.00		Pre-Post
Fast or Deep Water	Male	30.1	26.2	20.0	8.0	.00	.00	Pre-Post
	Female	37.9	31.4	26.7	5.9	.00		Pre-Post
Becoming Lost	Male	35.7	29.3	20.7	17.0	.00	.00	Pre/Middle-Post
	Female	41.9	37.1	30.1	7.2	.00		Pre-Post
Getting Dirty	Male	21.3	17.7	12.5	8.0	.00	.00	Pre-Post
	Female	19.4	16.4	11.4	6.5	.00		Pre-Post
Inadequate Clothing	Male	30.0	27.1	21.5	6.4	.00	.00	Pre/Middle-Post
	Female	36.3	35.9	24.7	10.4	.00		Pre/Middle-Post
Not Enough Training	Male	29.8	22.9	21.5	6.4	.00	.00	Pre-Middle/Post
	Female	40.9	30.7	26.8	11.8	.00		Pre-Middle/Post
Insufficient Food	Male	31.4	27.4	23.8	4.1	.02	.00	Pre-Post
	Female	34.7	28.0	22.7	7.7	.00		Pre-Post
Cold/Hot Temperatures	Male	31.6	27.3	19.6	12.7	.00	.00	Pre/Middle-Post
	Female	32.9	31.2	23.6	5.7	.00		Pre-Post

Table 3

Frequency of Elevated Fears Levels of Males and Females

Gender	Fear Level		Total
	> 40	< 40	
Females	30	57	87
Males	7	80	87
Total	37	137	174

$$^a\chi^2 (1, N = 174) = 18.16, p < .001.$$

Table 4

Frequency of Significant Change in Levels of Social and Physical Fears

Fear	Significance		Total
	<.05	>.05	
Social	12	16	28
Physical	29	1	30
Total	41	17	58

$$^a\chi^2 (1, N = 58) = 20.24, p < .001.$$

Implications

There are two sets of implications relative to the findings of this study. From a marketing and programmatic perspective, useful information can be gained by knowing what participants of structured natural environment and wilderness-challenge programs fear. As has been reported in past research, the findings of this study suggest that the social-based fears such as not meeting the expectations of others are more anxiety-producing than the physical-based fears. Further, this study found that the social-based fears are more resistant to change. It would seem that learning facts and skills and completing the experience alleviate most physical fears. The persistence of some social fears (e.g., not fitting in with the group) may stem from the students' doubts about their acceptance by their group in the course. Or, it may stem from the knowledge that acceptance

by their course group does not necessarily assure them of acceptance by the next group with which they travel or work. These points and the item-specific findings may suggest ways some providers of these courses can market and deliver wilderness-challenge and similar programs (Goodale 1985:359).

From a sociological perspective, the findings support past work that suggested that females report higher levels of fear in outdoor programs such as the one studied than do males. These differences were particularly evident in the "letting down" variables. While reassuring in the sense that the data are in line with past research, the findings are disturbing in another sense. Despite the common belief that attitudes about leisure and recreation were becoming less differentiated based on gender (Ibrahim 1991), the differences reported in this study suggest that with respect to fear in outdoor programs, there may be persistent and widespread differences between men and women. Although this trend was first ascribed to more honest responses on the part of females (Ewert 1988), the strength of these differences suggest that a powerful phenomenon may be in play--perhaps social learning. If social learning is an influencing factor in the development of fears, particularly among females, programs such as the one studied can play an important role in reducing those fears. From the broader context of society, the true value in programs such as this one may lie more in the modification of fear and feelings of inability and less in the learning of any particular skill or technique.

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Outdoor Leadership: A Question of Vision and Ethics

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Outdoor education increasingly includes programs for youth-at-risk, multi-cultural groups, battered women, and other special populations. The diversity of such groups and their needs and expectations place additional demands upon the outdoor leader. "Good judgement" on a trip with seniors may not be identical to "good judgement" on a trip with youth-at-risk; group exercises appropriate for young males of color may be inappropriate for women who have been abused. The diverse populations and situations will require outdoor leaders to become more self-aware, reflective, and sensitive to culture, race, and gender differences (Greenleaf, 1970; Shapiro, 1988; Terry, 1988). Resolving conflicts and ethical differences will also include competencies in critical thinking and ethical decision-making as applied to outdoor recreation/education (Hunt, 1989; Warren, 1989). This exploratory study looked at student journal writings and papers during a course about ethical outdoor leadership that included readings from the areas of outdoor recreation and ethical leadership. The text of 26 students was analyzed using the Minnesota Contextual Content Analysis computer program (McTavish & Pirro, 1989) and traditional content analysis. Preliminary results indicate a conceptual difference between writings about ethical leadership and outdoor leadership. The students perceived the material about outdoor leadership as practical and action-oriented. They saw the information about leadership and ethics as being academic and not-very pragmatic. As the course progressed, and in their final papers, the material of both fields begins to be integrated using examples of class exercises and discussions. Students provided more ethical analysis when discussing in-class exercises and student interaction than responding directly to readings or lecture information. The use of critical thinking skills did not increase, which may reflect the lack of consistent, direct teaching of these skills. Finally, the students made small changes in applying the principles to their own leadership and ethical frameworks. Future research should address preconceptions about leadership, direct teaching of critical thinking skills and ability to describe ethical dilemmas, the role of ethical followership, and the integration of readings with class experiences for analysis and transfer of ethical leadership skills.

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Neuroendocrine Reactivity During the Naturalistic Stress of an Outward Bound Course

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Recent studies have found that subjects with high hostility propensity have greater catecholamine (CA) and cortisol (CT) levels during laboratory stressors. The present investigation sought to determine if similar patterns would be found in the naturalistic setting of an Outward Bound experience, and if high versus low aerobic fitness would influence CA and CT levels in this setting. Sixty-six individuals volunteered for the study from participants who had registered for a nine-day 'adult intensive' Outward Bound course. Thirty-one subjects were selected from those who volunteered. The Cook-Medley Hostility Inventory was completed by each subject prior to arriving for their course, and aerobic fitness estimates were completed within the first six hours of the course using the University of Houston Non-Exercise Test. Stress levels were quantified by urinary CA and CT excretion. Three to five hour urine samples were collected for the following activities: rockclimbing/rappelling, whitewater canoeing, ropes course, off-trail backpacking, commuting from airport to base camp and back, and one night-time sleep sample. At the beginning of each activity period, all subjects voided and at the end of the three to five hour period urine was collected, measured for total volume, and a sample was taken and frozen within two hours of collection. The urine was assayed by high-pressure liquid chromatography with electrochemical detection to determine levels of excreted epinephrine (E), norepinephrine (NE), and cortisol (CT). The CA and CT were then quantified by mg of creatinine. Of the 31 subjects (14 females and 17 males), nine were classified as high hostile (HiHo) and 22 as average to low hostile (LoHo). The classifications for aerobic fitness were: 26 average to high fit (HF) with an estimated max VO_2 greater than 39 ml/kg for women and 46 ml/kg for men, and five low fit (LF) subjects with lower estimated VO_2 max. The data were analyzed by the two levels of hostility and two levels of aerobic fitness using univariate ANOVA with repeated measures across activity periods. The analysis of hostility revealed significant CT excretion differences between hostility levels for four of the nine activity periods with the LoHo subjects excreting higher CT levels. The four activities where this was found were: off-trail backpacking, ($F=4.74$, $p<.05$), the first rock climbing experience ($F=8.59$, $p<.01$), ropes course ($F=6.64$, $p<.01$), and the return van ride to the airport at the end of the course ($F=5.60$, $p<.05$). The ANOVA for fitness revealed a significant (fitness $\times$ activity) interaction for E, NE, and CT. Plots of the interactions seemed to indicate that the low fit subjects had greater excretion of E during the second climbing/rappelling experience and during the second day of whitewater canoeing, as well as greater NE and CT excretion during the second day of whitewater canoeing. The two most noteworthy findings of this study are: 1) the greater CT levels at four activity periods for LoHo subjects, and 2) the greater E, NE, and CT levels for low fit subjects. Previous studies dealing with plasma CA have found higher levels of CT in HiHo subjects which has contributed to the theory that hostility propensity may be a significant risk factor for cardiovascular disease. The present study's findings of urinary CT being excreted at greater levels in LoHo subjects will need to be further studied. Previous studies of CA response to stress have not clearly demonstrated the relationship of physical fitness to neuroendocrine reactivity. However, the findings of lower reactivity for HF subjects provides support for the theory that aerobic fitness, even at an average level, may be a physiologic advantage under stress. A point of interest for outdoor adventure programs like Outward Bound, is that highly challenging whitewater rapids and rock climbing/rappelling seems to elicit the greatest neuroendocrine response for all subjects, but especially for those with a low aerobic fitness level.

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Phenomenological Study of Wilderness Experience and Human Development

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This study is aimed at better understanding the phenomenon of interaction between the individual and the natural environment from a human development perspective. It is a qualitative study focusing on the scientific study of the human experience in a natural environment. The main theoretical context for this study is that of phenomenology (Husserl, 1859-1938), from which stems phenomenological psychology, whose founder Giorgi (1931-) defined it as being the study of phenomena as experienced by enlightened human beings, and the research methods for the study of these phenomena (Giorgi, 1983). The focus is thus the *Lebenswelt*, which in Husserlian terminology designates the world originally lived, which comes before what is learned objectively in the world. On the other hand, the eidetic nature of the phenomenological approach to research helps us distinguish the essence of the experience of intimate interaction with nature from that which is accidental. What we are actually seeking to determine, through the diversity of the experiences, is their fundamental structure. In the review of literature, only one phenomenological research study was found pertaining to wilderness experience. Segal (1988) conducted the "communion with nature" experiment on six adults who had had previous wilderness experience. He described how these experiences resulted in what he calls "consciousness-raising on the sensory, emotional and spiritual levels." This research perspective is seen complementary to studies pertaining to the affective domain in outdoor environmental education as, for example, those reported by Crompton and Sellar (1981) and Iozzi (1989). The research design consisted primarily of field work, during which we invited 8 to 10 participants to spend 10 days together in a natural wilderness environment. Most of the participants were adult volunteers who were not familiar with the approach described below, although they were generally at ease spending several days in a wilderness environment. We proposed activities encouraging the participants to explore their relationship with elements of nature (e.g., trees, clouds, moss,) through body movement, and more specifically, dance. The focus was placed on a relationship that was experienced through the body, one that was felt rather than thought out. We gave priority to what Merleau-Ponty called the pre-reflexive experience. In our approach, the participants had to identify with these elements of nature. To collect data, three different techniques were used: (a) the self-report, (b) the interview, and (c) participative observation. The basic data obtained were essentially descriptions of these experiences of identification with and embodiment of elements of nature. For data analysis, the method used was that of phenomenological research (Giorgi, 1983; Van Mannen, 1989). Using an essentially descriptive technique applied to raw research data, the objective was to explain the essence or structure of the experience, eliminating as much as possible any philosophical or cultural presupposition. The results were presented in a descriptive format and defined the basic structure and the essential components of the phenomenon studied. In this paper, we referred primarily to two on-site experiments we conducted during the summer of 1987 (5 men, 4 women) and the summer of 1991 (3 men, 6 women) with adults aged 24 to 48. The study has led us to develop an approach to the educational experience in a natural environment as seen from the perspective of a productive dialogue between the individual and elements of nature. This interaction is experienced through the individual's participation in an interiorization-exteriorization process which emphasizes the place of a moving body as a feeling-oriented experience. This process helps the participants objectify their experience through symbols of identification with elements of nature (e.g. shifting moss). The study has led us to understand that what a symbol means for a person tends to reveal itself at different levels of meaning: the sensory level, the

psychic level and the axiologic (value) level. Wilderness is thus understood as (a) a place of feeling-oriented experiences, (b) the seat of an unequalled diversity of phenomena which enable the individual to diversify that part of his or her potential which can be explored and fulfilled, and (c) a life context promoting the development of a feeling of belonging to a whole which surpasses our comprehension. Our study has also led us to understand the primary role of body movement in nature, as we approach it, as not solely the embodiment of elements themselves, but also as the embodiment of the movement of unfolding of the three different levels of meaning. The embodiment of the intrinsic natural movement of true symbols towards the revelation of these levels or possibilities of meaning is understood as a developmental experience, but also as an aesthetic experience. Body movement in nature, even in its simplest form, when approached in the perspective we have described, supports and activates the aesthetic dimension of wilderness experience. It puts in a concrete form a dimension often left out of wilderness educational programs because of its intangible nature.

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The Impact of a Corporate Adventure Program

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Corporations continue to use adventure challenge activities to create or enhance a sense of cohesion, or team, within their corporate culture. The purpose of this study was to document the perceived benefits of an "Adventure Challenge" program on a short term basis. The program was designed to meet specific expectations held by high ranking employees of an international accounting firm. The goals for the program were developed in consultation with instructional designers and their superiors responsible for the firms training and development. This paper reports on efforts to document the impact of an adventure challenge program integrated into an extended corporate education course. Two hours of adventure challenge activities took place in the afternoon during an intensive course in business consulting. Some of the goals of the program included building a network of international cooperation, creating trust, introducing an attitude of risk taking behavior, and recognizing the importance of working as a highly functioning team. Subjects in the study were assigned to small teams of eight or more members. The groups were structured with the intent of mixing participants from different countries as well as from different levels of responsibility within the firm. Groups remained the same over the ten day period with the same facilitator. Each team participated in a similar set of activities which were carefully sequenced to provide problems of steadily increasing difficulty. Activities included many standard initiative tasks which were adapted to fit the clientele. Common names of some of those activities are the nitro crossing, zig zag, trolleys, trust sequence, Mohawk walk, and the pumper pole. Each event was followed by a debriefing session designed to create an avenue for reflection with a large group debrief finalizing the program on the last day. Opinionnaires were administered to participants prior to the start of the program and at its conclusion. Over 125 participants from five separate schools responded to the three questionnaires developed to explore their views. An eleven item questionnaire attempted to assess the extent to which program goals were met in each specific school. The results were reported as mean scores and tested for significance using a two tailed t scores. One instrument consisted of an eleven item opinionnaire which asked participants to assess the degree to which specific program goals were met. A pretest to establish a baseline of participant views was used for comparisons after the adventure challenge component. The opinionnaire was a five point Likert scale which addressed communication, risk taking, stress management, self confidence, motivation of others, trust, conflict management, and cooperation with colleagues from different countries. Significant results were reported in the areas of communicating with colleagues from other countries and management of conflict. Four of the five reported significant changes were in self confidence. Two of five schools reported significant change in communication abilities, handling stress, and trusting associates. A second Likert scale instrument was used on a post-test basis only. This survey asked participants to rate program activities in terms of how much they enjoyed each one and the extent to which each activity reached the previously stated program goals. The results are reported as mean scores in rank order. The data suggested that it is important to provide participants with several enjoyable activities in order to have participants feel that the goals of the program were achieved. It is also interesting to note that the mean scores for meeting program goals were consistently higher than the means for enjoyment for corresponding activities. This finding suggested a level of mature reflection on the part of the respondents. It must be assumed that facilitator ability and activity sequencing has influenced the ranking of these activities. A third instrument was open ended. It asked participants to give their views on six items regarding

the value of program activities and personal changes created by the program. For many participants the adventure challenge program served as a powerful socializing force. Teamwork, knowledge of others, and friendships were the most frequently mentioned worthwhile outcomes. The results provide additional support for the overall positive socializing effect of adventure challenge activities. The results of this study lend support to the belief that adventure challenge programs assist corporations in boosting self-confidence in their employees, reducing social barriers between members of the organization, and facilitating the development of a team concept. The results also suggested that the benefits are dissimilar for each participating team. In some groups improved communication with subordinates occurred, in others, several participants gained in their ability to motivate others and trust associates. The most powerful impact of the adventure challenge program was that of socializing participants from various parts of the world to one another. Participants formed friendships with others from foreign lands and worked well together to accomplish the common challenges they were asked to pursue. While the research design should be improved to provide more definitive data on the role of adventure challenge activities in corporate educational programs, this preliminary study did suggest some of the more powerful effects of such programs.

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Facilitators: One Key in Implementing Successful Experience-Based Training and Development Programs

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An increasing number of corporate experience-based training and development (EBTD) programs are being implemented in both the profit and nonprofit sectors throughout the United States, and a host of other countries. In a survey recently published in *Training and Development Journal*, Wagner, Baldwin, and Roland (1991) found that 13% of U.S. Training Directors reported that their organizations currently used some form of experience-based outdoor training and development. The qualitative and quantitative data that have been generated to date on EBTD have indicated that individual and group behaviors appear to change positively after subjects have participated in these training programs. One key reason that has been given for this positive change is the skill level of the facilitator—both in the "hard skill areas (e.g., equipment set-up, activity rules, safety guidelines) as well as the "soft" skill areas (e.g., group process, human behavior, debriefing). An assumption that the development of facilitator competencies in soft skills will lead to improved program outcomes has led to an increasing emphasis on the acquisition of soft skills over the last few years. However, there is a scarcity of empirical research to support this assumption. A two year evaluation of a major experience-based training program involving five in-house facilitators, 38 separate training groups, and over 300 individual participants has allowed us to make some empirical assessment dealing with this important issue. An analysis of covariance (ANCOVA) was first completed to determine if significant differences in key organizationally desired behaviors (individual and group) could be attributed to who facilitated the group's program. Results indicated that a significant amount of variance could be attributed to the facilitator. For the first year's program (13 groups) facilitator training consisted primarily of modules in the hard skills area. Before the start of the second year's program, (25 groups), the same five facilitators were given three days of extensive training in soft skills, especially with regard to group process and human factors. A multiple analysis of variance (MANOVA) was done to compare the first year's program with the second year's program. Results indicated the experiential program was significantly more effective during the second year. The findings support the importance of soft skills training for facilitators and raise the following questions:

1. Facilitator training programs are commonly 3-5 days in length. Is there an ideal hard skill/soft skill ratio?
2. What are the consequences as well as ethical dilemmas when a trainer does not have a sound soft skill expertise to offer?
3. Who has the better opportunity for program success, the facilitator who begins his/her EBTD training with established soft skills competencies, or the facilitator who began with hard skills competencies?
4. What about the internal validity of field studies like the one described?

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Evaluation of a Comprehensive Challenge/Adventure Program for Sexually Abused/Exploited Youth

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This study attempted to validate the challenge/adventure methodology as applied to sexually abused/exploited youth in a residential treatment placement by measuring personality and behavioral changes in those youth. The Fresh Start Program is a special living and learning placement for youth between the ages of 12-18. Youth in placement typically present a complex and variable assortment of educational, psychological, and behavioral problems. The youth live in foster family homes, which operate under the "Family Education Model" for behavioral management and behavioral improvement. There are two homes on the grounds of the large camp and retreat center facility in Northern Wisconsin, and the youth attend a special education school on the ground. Average length of stay in the placement is 12 months. The challenge/adventure program overlaps the academic curriculum, and the counseling program, as it is the teachers and therapist who facilitate the challenge/adventure sequence. In a typical school year of 180 days, the youth spend about 140 days in school, and about 40 days on special adventure trips. The whole program for psychological and educational intervention was complexly interwoven with the challenge/adventure program, and it is thus difficult to ascertain the influence of the various dimensions of the total system. It might be argued that this study would be better titled an evaluation of a comprehensive placement and treatment program, not of the challenge/adventure methodology. However, the Fresh Start Program represents a unique model for residential treatment placement, in that the whole program was designed to follow challenge/adventure theory and practice. It can be argued, thus, that any study on the impact of the program can be viewed as quite relevant to the question of validating challenge/adventure programming. The data were collected from 13 youth including 7 males and 6 females. The age range was 12-18 with an average of 14.8. All of the youth had a comprehensive psychological and psychoeducational diagnostic evaluation prior to placement and multi-disciplinary staffing had assigned a primary psychoeducational diagnosis of "behavior disorder." The pre-placement psychological and psychoeducational evaluation provided data on academic achievement based on both the Wide Range Achievement Test (WRAT) and the Peabody Individual Achievement Test (PIAT). When the youth entered the program they were given the Tennessee Self-Concept Inventory. At the end of the first week of placement, four adults who had had interaction with the youth filled out the Jesness Behavior Checklist (JBC). All four tests were administered at the termination of placement. This study essentially involved comparison of the pre-program and early placement data to that at termination of placement. Because of the small number of subjects, there were no statistical analyses of the data. Instead, the results are shown as tabular and graphic summaries. Based on these data, it appeared that gains were great in academic achievement as measured by WRAT and PIAT. It was suggested that self-concept gains were the greatest in the areas of identity awareness, the concept of self as physical beings, and in "social concept." Many have criticized assessment of self-concept changes in any study attempting to validate challenge/adventure methodology, arguing that increases in self-concept may or may not be accompanied by actual behavior changes. In theory, increased self-concept should bring improved social behavior. The results of the JBC showed that there were a number of positive behavioral changes in the youth. The

results were discussed in terms of validation of the total challenge/adventure methodology. It was recognized that the complexity of the total living and learning program made it difficult to factor out specific dimensions of the program as causative in the improvements in self-concept, behavior, and academic achievement. However, because the total program was designed around the challenge/adventure methodology, the results do seem to offer some validation of the approach.

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The Impact of Total Employee Participation in an Experience-Based Training and Development Program, or Corporate Adventure Training Program, on the Corporation's Work Climate

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Experience-based Training and Development (EBTD) or Corporate Adventure Training (CAT) has had a short history of usage and a long history of problems with its credibility. Proponents of EBTD/CAT have claimed it was an effective and appropriate way to build teams, develop individuals and improve companies. They stated their case on a moderate collection of personal anecdotes and testimonies. Opponents of EBTD/CAT have claimed it was a sham, like many of the group-oriented encounter techniques of the sixties. They cemented their opinion by pointing to a clear lack of research evidence, failing to substantiate the impact of such programs. With the decreasing value of the development dollar, more companies have questioned the efficacy of EBTD/CAT programming and called for hard data to support its transfer of learning. This study examined changes, over a two year period, in the corporate climate of an Australian company, which chose total employee participation in an EBTD/CAT program. A major Australian government-owned corporation, primarily involved with public service delivery, chose EBTD/CAT as the sole means of training and development for its entire complement of (approximately) 5,000 employees. The main focus of this training was to alter the climate of the organization around the two new cultural concepts of teamwork and empowerment. A sample of 100 employees, stratified for gender (male 65% and female 35%) and management level (upper 10%, middle 30% and lower 60%), was randomly selected from the population of about 500 managers in a company of 5,000 employees. The sample of 100 were surveyed three times (before, during and after treatment), but all 5,000 employees underwent the treatment. Treatment consisted of a five day residential EBTD/CAT program during the most recent year (between the dates of July 1, 1990 and June 30, 1991). No other training and development schemes were underway during the two year period of study (from December 1, 1989 to December 31, 1991). The EBTD/CAT program was fairly standard in design, with the first day devoted to socialization activities, icebreakers and de-inhibitors. The next two days consisted of cooperation, communication and trust exercises followed by common group initiative activities and problem solving tasks. The fourth day consisted of a high ropes course, with choice of egress by rappelling or zip wire. The final day incorporated a great deal of personal reflection, solo time and group dialogue around action plans for future challenges. Evening were spent attending lectures by the company facilitators and presenting dramatic skits interpreting the daily events. Although attendance was mandated by the company, the program operated under a "challenge by choice" philosophy and, once in attendance, no employees were forced to participate in any activity against their will. Survey rounds, consisting of three instruments, were administered to subjects on three separate occasions, each approximately one year apart. Instrumentation included three surveys: section III of the Individual—Team—Organization (ITO) survey (Anderson, 1987); the short form of the Organizational-Health (OH) survey (Phillips, 1989); and the Motivational Analysis of Organizations—Climate (MAO-C) survey (Fareek, 1989). The 17% attrition over two years was likely due to employee turnover from company downsizing (estimated at 13%), and yet attrition was proportionate across strata and reasonable (with a return rate over 80%, non-respondent bias was not an issue). Data met all normality requirements, therefore, two factor ANOVAs were conducted. Two main effects for management level were noted, indicating that in these two cases the three management levels differed on the averages of their opinions. All, but a few, analyses showed main effect changes in means across the three times of surveying: before, during and after, indicating that opinions changed over the treatment period. Since the limited studies in EBTD/CAT have concentrated on benefits and changes to the group or to the employee, and have apparently ignored the bottom line of organizational benefit and change (a concern prevalent for many companies) the intent of this study was to track changes in the one aspect of corporate climate.

This study does not claim that the EBTD/CAT program caused the changes discussed. Regardless of the testimonials from the company executive, the EBTD/CAT program may have contributed to the improvements, but without a control company (almost impossible to obtain under most circumstances) the certainty of causality should not be stated. Furthermore, these findings must not be generalized beyond the parameters of this study: changes in corporate climate for a major Australian company, government-owned and primarily involved in public service delivery, with management response to the surveys and total employee participation in an EBTD/CAT program over the period 1989–1991. In summary, and in the opinion of three levels of management, but not necessarily all employees, this particular company successfully changed its corporate climate over a period of two years, during which all employees participated in an experience-based training and development or corporate adventure training program only. Overall, the company improved on its planning utility, structure flexibility, systems functioning (upper managers were least pleased with systematic changes), sensible & supportive roles, positive relationships, excessive delays in workflow, reflection time, and mission and goal clarity during the first year; while concern for getting the job done (rather than accounting for time and cost), alignment, marketplace impact, and profit versus growth decreased over the same period, although decreases were not seen as necessarily detrimental in this case, since the company moved through a desired period of well-needed readjustment. During the second year, reflection time decreased, but work enjoyment improved (lower managers enjoyed their work least), even though workloads increased over both years. Decreases in planning seriousness, crisis avoidance, purpose contribution, and responsiveness index; increases in stretch; and fluctuations in resource provision, strategic position, purpose clarity, and individual versus organizational goals, were all overshadowed by complex interactions between the time of survey (before, during or after treatment) and the level of manager (upper, middle or lower) responding. Feedback from the company executive committee highlighted the expected influence of several extraneous environmental variables on these interactions and attributed some interaction to the treatment of the EBTD/CAT program. Future research ought to broaden the base of knowledge concerning the impact of EBTD/CAT programs on other aspects of corporate climate (motivation, etc.) and deepen the base of knowledge by replicating or extending this study with companies from other nations, involved in other areas of business, and consider all types of employees, not just managers. Despite the inherent problems of controlling for environmental factors, either by formal control group or informal speculation, this type of research is valuable as companies seek evidence on the efficacy of this kind of outdoor learning.

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